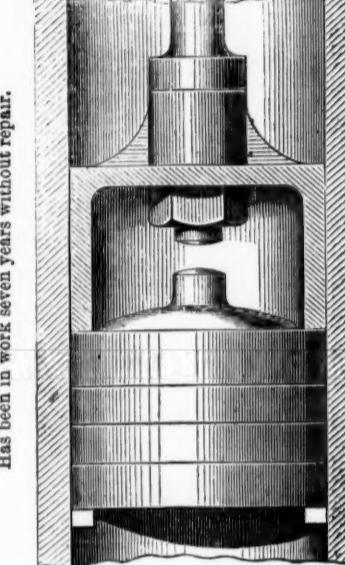
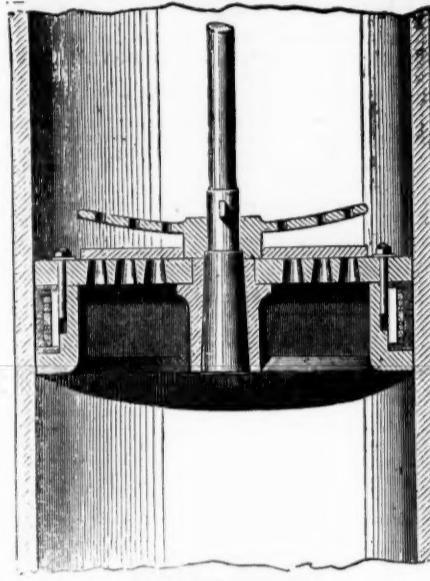


MATHER AND PLATT MILLWRIGHTS, ENGINEERS, AND MACHINE MAKERS, Salford Iron Works, Manchester.



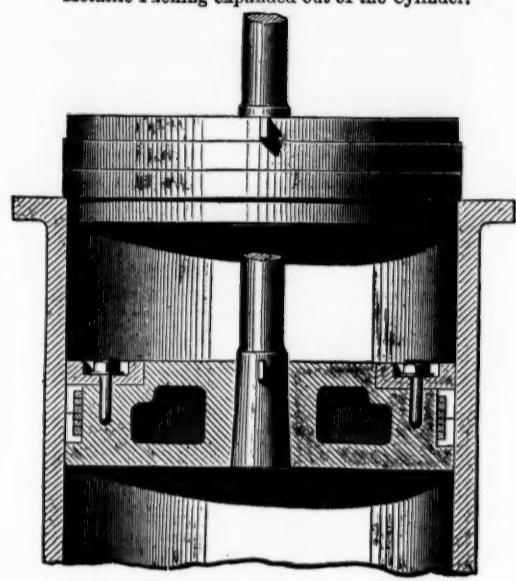
COLD WATER PUMP FOR DEEP LIFTS.

Lift 348 feet.



AIR-PUMP BUCKET.

Metallic Packing expanded out of the Cylinder.



PISTON IN THE CYLINDER.

MATHER and PLATT beg to call the attention of ENGINEERS and USERS of STEAM POWER to their PATENT PISTONS, AIR PUMP BUCKETS, and COLD WATER PUMPS. The estimation in which these Pistons, &c., are held is shown by the fact that 4760 have been made, as well as by the following Testimonials from gentlemen whose large experience and extensive practice enable them to judge of their qualifications:—

"GENTLEMEN,—During the last 19 years, commencing in 1848, I have put in upwards of 33 of your patent metallic pistons and pump-buckets, into 49 engines and 20 pumps, under my care at the Bridgewater Trustees' Collieries. I can bear testimony to the very efficient and economical working of the same, and feel confident that with ordinary care they will give general satisfaction, wherever brought into use, possessing, as they do, many practical advantages over other pistons and buckets, being simple, durable, and effective. I have one piston (No. 671) which has been working daily for more than 15 years, one (No. 1586) 10 years, and one (No. 2246) over 7 years, without cost of repairs or trouble of any kind, except occasional cleaning. The smooth and highly polished condition of the cylinders during this length of time convinces me that the action of the metallic packing is so equable and perfect as to render the piston steam-tight and self-adjusting, without producing any appreciable friction. I have had two of your patent metallic pump-buckets working daily for over seven years, one lifting 300 feet, and one 348 feet, and both are yet performing good duty. I am now putting in one of 10 inches diameter patent buckets, to work 10 strokes, of 8 feet 4 inches per minute, under a pressure of 12 atmospheres, and feel confident of success, thus showing the superiority over other buckets, more especially where long lifts and simplicity are required. I herewith hand you an order for a 53-inch diameter piston and rod complete, also air-pump bucket, 26½ inches diameter, and rod complete. Hoping you will forward the same to these collieries as early as practicable,"

"I remain, Gentlemen, yours very respectfully,

"JESSE TIMMINS, Colliery Engineer.

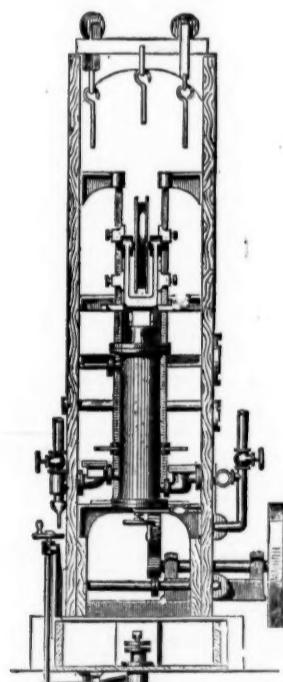
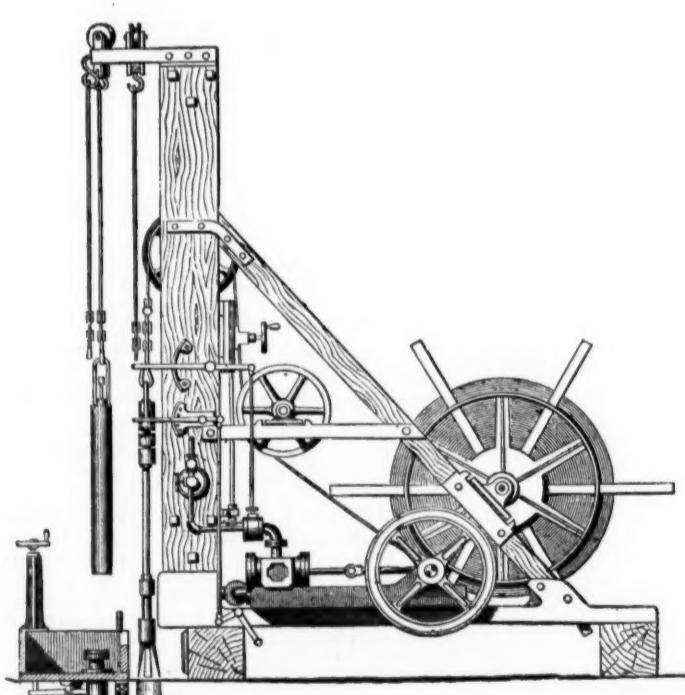
"Frampton Cottrell, near Bristol, October 31, 1867.

"GENTLEMEN,—I have ordered direct, or included in specifications of engines which I have prepared, upwards of 100 of your pistons and buckets, between the years 1850 and 1867, and I feel convinced they are the best pistons that have come under my notice, and if any proof was wanting as to my opinion of them, it may be found in the fact of my ordering the last 70 inch piston from you for our present works.

"I remain, Gentlemen, yours truly,

"WILLIAM BAILEY.

"Messrs. Mather and Platt, Salford Ironworks, Manchester."



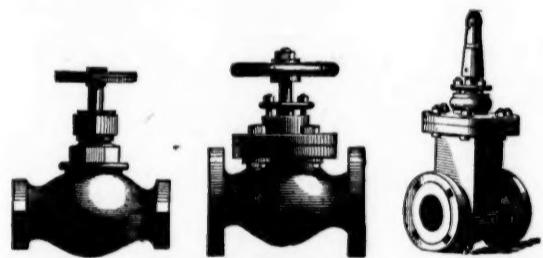
Improved Patent Earth Boring Machines.

A considerable number of these Machines has been in most successful operation for some years in exploring for minerals and coal and the boring of Artesian wells, for supplying many towns, manufactoryes, &c., with water. Upwards of 50 bore-holes, from 6 in. to 24 in. diameter, representing in all 20,000 ft. of boring, have been sunk in various parts of the world, through rocks of every form and degree of hardness, from the New Red Sandstone to the Igneous formations, as well as Chalk and the London Clay.

The Machine is worked entirely by steam-power, requiring a small boiler, from 6 to 12 horse power, according to diameter of the bore-holes. The framing is made of wood, to render the Machine of easy transport.

The rate of boring is not appreciably decreased as the depth increases, as a flat rope is used in place of rods in the old system

M. and P. beg to call attention to their Revised List of Prices of VALVES, TAPS, &c. They also request the notice of Water Companies and Hydraulic Engineers to their IMPROVED SLUICE VALVES for Water. The slides have Gun-metal Facings, are of Wedge form, and when screwed down are tight on both sides:—



GUN METAL TAPS.		CAST IRON STEAM VALVES, WITH GUN METAL VALVES AND SEATINGS.		CAST IRON SLUICE VALVES, WITH GUN METAL FACINGS.	
Bore. Inches.	Price. £ s. d.	Bore. Inches.	Price. £ s. d.	Bore. Inches.	Price. £ s. d.
2	0 4 0	2	1 2 6	2	1 10 0
2½	0 4 6	3	1 17 6	2½	2 5 0
3	0 6 0	4	2 15 0	3	3 0 0
3½	0 8 6	5	3 15 0	3½	3 16 0
4	0 8 6	6	4 17 0	4	4 14 0
4½	0 11 0	7	6 0 0	5	5 14 0
5	0 14 0	8	7 5 0	6	6 16 0
5½	0 18 0	9	8 15 0	7	8 0 0
6	1 2 6	10	10 10 0	10	9 6 0
7		11	12 5 0	11	10 14 0
8		12	14 0 0	12	12 4 0

The attention of those interested in Metallic Mining is called also to an

IMPROVED BUDDLE,

OR

ORE WASHING MACHINE*

Which they believe will be found of great benefit.

TERMS AND PARTICULARS CAN BE HAD ON APPLICATION.

New Penrose and Unity Silver-Lead Mines (LIMITED),

IN THE PARISH OF SITHNEY, NEAR THE HARBOUR OF PORTHLEVEN, CORNWALL.

CAPITAL £9000, IN 3000 SHARES OF £3 EACH

(WITH POWER TO INCREASE).

Of which £1 per share will be payable fourteen days after the first general meeting, to be convened as soon as 2000 shares have been applied for; and a further sum of £1 per share will be payable three months after the said meeting. Due notice of not less than three months will be given for the remaining £1 per share, should that sum or any portion of it be required. Thus the liability on each share is confined to £3 only.

DIRECTORS (PRO TEM.)

GEORGE C. HOCKIN, Esq., Director of the Anglo-Mexican Mint Company, Finsbury-place South, London.

WILLIAM HARVEY, Esq. (Harvey and Co.), Hayle.

JOHN W. LUKIS, Esq., Woodlands, Isleworth.

Two additional directors to be appointed at the above-named meeting of shareholders.

BANKERS—City Bank, Threadneedle-street.

SOLICITOR—J. RICHARDSON, Esq., 15, George-street, Mansion House.

SECRETARY—WM. WARD, Esq.

OFFICES,—95, BISHOPSGATE STREET WITHIN, LONDON.

These mines are situated in one of the best known silver-lead producing districts of Cornwall. Mr. John Hunt, for many years director and principal proprietor of the Pont Pen Lead Works, in France, obtained a sett from J. J. Rogers, Esq., for the purpose of recovering the ores in the surface refuse on the Penrose and Unity Mines, and working the lodes above the adit level. In the course of his explorations three important lodes have been discovered; one nearly parallel to the old workings, and distant 4 fms. from them; and the two others crossing the old lode at angles of about 64°. One of the latter is about 26 fms., and the other about 126 fms., north of the flat-rod shaft. [The full prospectus, which can be obtained of Mr. WARD, contains the reports of Captains James, Curtis, Foote, Lanyon, and extracts from the *Mining Journal* of October 1st, 1864, relative to the excursion made by the "Miners' Association of Cornwall and Devon" to the Penrose Mines].

The facilities afforded by the former operations for developing these new lodes, as well as the old ones, are most important, the shafts being sunk and levels driven, so that almost immediate access may be had to the newly-discovered portions, which were unknown during the previous working of the mine (with the exception of a short drivage on one lode, which produced lead ore about 100 fms. west on the sea beach), and the results of recent workings at the adit level (below which, except for a few feet, the present lessee is unable to work on account of the water) leaves no room for doubt that, as soon as the water is drained, tributaries may be put to work at various points to raise ore at a considerable advantage. It is to be observed that the improved modes of dressing lead ores will enable much of the produce to be sold at a profit, whereas it was formerly valueless.

The low price at which an engine and the requisite materials may be obtained at this period will most materially lessen the expense of opening the mines.

With these advantages, an outlay of about three to four thousand pounds is estimated to be sufficient, not only to make available the produce of the new lodes alluded to, but also to work the old lode in its extensive unexplored parts.

As soon as the mine is opened there can be but little doubt that the property will not only be very considerably enhanced in value, but in all probability it will become lasting and highly productive mines; in fact, such a chance of great success with a comparatively small capital can rarely be found.

The extent of the sett is considerable, and the dues (1-20th) very moderate. The lease is for 21 years, from December 1, 1863. Mr. Hunt, the present lessee, estimates that in clearing up shafts, driving and clearing levels (which led to the discovery of the above-mentioned new lodes), erecting dressing machinery, and doing other work up to the present time, he has incurred a cost of about £5,000, and he has dressed and sold ores from the mines to the value of £3438 7s. 10d., leaving a balance against him of £1561 12s. 2d.; and Mr. Hunt has agreed to transfer the lease and plant to the company (an inventory of the latter is in the hands of the secretary) for 300 shares fully paid-up and £500 in cash, being confident that the results of a proper prosecution of the mines will amply remunerate him for the balance not claimed by this arrangement.

The carriage of materials used on the mine and the expense of carting the ore to the harbour is only about 6d. per ton, which is a most important item of expense in many mines.

In addition to the reports published, the opinions of other practical men may be known, and specimens and plans of the mines seen at the office, where application for shares must be made.

FORM OF APPLICATION.

To WILLIAM WARD, Esq., 95, Bishopsgate-street Within, London.

SIR.—I request you to allot me shares in the New Penrose and Unity Mines, and I engage to take the same or any portion thereof you may allot me, and pay the calls thereon, agreeable to the terms of the prospectus.

Signed

Address

Sonora Silver Mining Company (LIMITED).

Registered under the Companies Acts, 1862 and 1867.

CAPITAL £100,000, IN 40,000 SHARES OF £2 10S. EACH

(WITH POWER TO INCREASE).

Deposit 10s. per share on application, and 10s. on allotment.

Calls 10s. per share, at intervals of not less than three months each, from the registration of the company, with the option for any shareholder to pay up in full, receiving 5 per cent. interest on excess over calls, thereby becoming entitled to share warrants to bearer under the Companies Act, 1867.

The deposit of 10s. per share to be returned in full in the event of no allotment.

DIRECTORS.

GEORGE C. HOCKIN, Esq., Director of the Anglo-Mexican Mint Company.

R. WALLEN JONES, Esq., Director of the Rossa Grande Gold Mining Company (Limited).

Captain M. F. MAURY, LL.D., F.R.G.S., &c., Belsize Park.

CHARLES MORRIS, Esq., Chairman of the United Mexican Mining Company (Limited).

WALTER SHAIRP, Esq., Director of the Royal Copper Mines of Cobre (Limited).

SOLICITOR—J. ARTHUR MORGAN, Esq., 1, Winchester-buildings, E.C.

BANKERS—The London Bank of Mexico and South America (Limited).

The London and County Bank and its branches.

BROKERS—Messrs. GEORGE HARRIS AND SONS, 27, Change-alley, London.

EDWARD FOX, Esq., 51, Dame-street, Dublin.

CONSULTING ENGINEER—JOHN PETHERICK, Esq., F.G.S. and M.E.

SECRETARY (PRO TEM.)—A. W. WETHERELL, Esq.

TEMPORARY OFFICES.

No. 1, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON.

ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing two valuable estates, called "The Huruapa" and "The Almada" estates, and situated in Sonora and Chihuahua, Mexico, and which have been provisionally purchased, under the advice of Messrs. John Petherick and J. P. Clemes, the well-known mining engineers, after a thorough personal survey. It is estimated by the above engineers that these properties will produce, when efficiently developed, £40,000 net profit per annum.

Full prospectuses and forms of application for shares, and copies of the reports, plans, &c., of the engineers, may be obtained from the brokers or secretary, at the temporary offices of the company, where may also be seen samples of the silver ores assayed by Messrs. Johnson and Matthey, and a copy of the Memorandum and Articles of Association.

TO CAPITALISTS SEEKING A FIRST-CLASS INVESTMENT
£5 per cent. per annum, free of income tax, with a prospective increase
to £7 per cent. per annum.

CAPITAL, £1,750,000, AND UPWARDS.

THE HULL DOCK COMPANY,

Incorporated by Act of Parliament, 1774,

proprietors of the Docks at Hull, the third port in the kingdom, are now issuing the remainder of the share capital authorised by recent Acts of Parliament. These shares are guaranteed to pay a dividend of £5 per cent., free of income tax, until one year after the opening of the Western Dock, and are limited to pay a maximum dividend of £7 per cent. in terms of the Company's Act of 1861. The new shares rank equally with the existing shares of the company, and there are no preference shares. The tonnage of the port is rapidly increasing, and in the year 1866 amounted to 1,343,819 tons.

The Dock Estate consists of the six docks at Hull, with large and commodious warehouses, offices, &c., adjacent to the docks, and the company possess large unnumbered houses and other property, which, in addition to the rates and taxes payable to the company, produce upwards of £14,000 a year. The reserve fund of the company available against contingencies is upwards of £65,000. The Western Dock, now in course of construction, is expected to be completed in the year 1868. The North-Eastern Railway Company hold £50,000 of the share capital of the company, and the Trinity House of Hull £30,000. The Lancashire Railway Company are seeking parliamentary powers in the session 1867-8 to enable them to subscribe to the shares of the Dock Company. The capital has been raised at rates averaging under £4 12s. per cent. The shares are £50 shares, the calls on which may be made by periodical payments extending over several years, or in one or more sums, at the option of subscribers.

Applications for shares and for detailed particulars of the financial position of the company may be made to G. W. DUMBELL, Secretary, Dock Office, Hull, November 18, 1867.

HUNT'S PATENT ORE-SEPARATOR, AND GOLD-WASHING MACHINE.

THIS MACHINE, with the latest improvements, will be found WELL WORTHY of the NOTICE OF ALL CONNECTED with MINING MATTERS, both as to its effectual working and cheapness, the licence from the 1st of December being considerably reduced.

Testimonials of the highest character, and all other information, can be obtained from Mr. JOHN HUNT, Porthleven, Helston, Cornwall; or of the manufacturers, Messrs. HARVEY and Co., Hayle, Cornwall.

N.B.—A Working Model of the Machine can be seen at the South Kensington Museum for Patents.

HERBERT AULT, ENGINEER,
DRAUGHTSMAN AND PATENTEE'S ASSISTANT,

VALUER OF MACHINERY, IRONWORKS, RAILWAY
and COLLERY PLANT, and other works; DESIGNER and CONTRACTOR for every description of RAILWAY and COLLERY PLANT, CONTRACTORS' and other LOCOMOTIVES, HOT AIR and HOT WATER APPARATUS, &c.

Preparer of models &c., for patentees, and every other assistance given upon the most moderate terms. Estimates given for taking down and erecting works and other machinery.

Applications addressed to HERBERT AULT, Netherton, near Dudley, will meet with prompt attention.

N.B.—HERBERT AULT begs to call the attention of gentlemen about to put up greenhouses or conservatories to his large assortment of designs at exceedingly low prices.

RAILWAY WAGON WORKS, BARNSLEY
MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by preferred payments through wagon-leasing companies.
WAGONS PROMPTLY REPAIRED.

THOMAS EDINGTON AND SONS,
PHENIX IRONWORKS, GLASGOW,
MANUFACTURERS OF ALL KINDS OF GAS AND WATER
PIPES, BRANCHES, BENDS, WATER-TRAPS, TANK-PLATES,
VALVES, and GENERAL CASTINGS.
ALSO,
RAILWAY CHAIRS AND SLEEPERS, AND GRIFFIN'S PATENT
PERMANENT WAY.
LONDON OFFICE,—63, OLD BROAD STREET.

THE BEVERLEY IRON AND WAGON COMPANY
(LIMITED),
MANUFACTURERS OF RAILWAY WAGONS, WHEELS
AXLES, LORRIES, CARTS, WOOD WHEELS, &c.,
IRONWORKS, BEVERLEY, YORKSHIRE.

THE RAILWAY SPRING COMPANY (LIMITED),
DIAL WORKS, WEST BROMWICH,
MANUFACTURERS OF
RAILWAY, WAGON, AND CARRIAGE SPRINGS.
Orders executed with the utmost dispatch, of first-rate quality,
and on moderate terms.

BAGILLT OIL COMPANY (LIMITED),
FLINT.
MANUFACTURERS OF BLACK GREASE
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).
LUBRICATING OIL, 1s. PER GALLON (Casks free).

**WROUGHT-IRON TANKS, CISTERNS, GIRDERs,
FUNNELS, &c., Plain or Galvanised.**
CATTLE TROUGHs, IRON CART BODIES, &c., GALVANISED
OR LEAD SERVICE PIPE, BRASS BALL VALVES, &c.
Merchants and Shippers supplied at the usual discount.

HENRY WATSON AND CO.,
No. 60, VAUXHALL STREET, LAMBETH, LONDON

COMPRESSED FUEL
(BIRD'S PROCESS)

CAN BE MADE EVEN BY HAND-PRESS LABOUR AT THE
PIT'S MOUTH, or at any WHARF or YARD where COAL or COKE
DUST is obtainable.

The loss of dust by frequent transport, waste of "small" from falling unburned between the furnace-bars, or being driven up the chimney by the draught, and consequent choking up of flues, is diminished by this process.

The foreign matter in admixture being but one-half per cent. to the ton, and of a nature to ensure perfect combustion, the coal or coke treated remains unspoilt.

Drying is very rapid, and no artificial system needed.

Gluten, cement, and all ingredients needed for mixing can be supplied in bags as required. License fee, £10; royalty, 3d. per ton.

Apply to—
JAMES BIRD,
No. 2, LAURENCE POUNTEY HILL, CITY, LONDON.

**UTILISATION OF COAL DUST AND MANUFACTURE
OF ARTIFICIAL FUEL.**

BARKER'S PATENTS.
THE LONDON PATENT COAL COMPANY (LIMITED)
having purchased the sole rights to these patents throughout the United Kingdom, are now granting licences to coal owners and others for the use of the invention.

The process is simple and inexpensive; the cost of manufacture, including the amalgamating material, being only 2s. per ton.

The fuel is without smell, and is available for all the uses of ordinary coal. It occupies 33 cubic feet of space per ton only, as against 42, the Admiralty measurement for coal. In the various tests it has undergone it has in every instance beaten similar round coal in evaporative power, weight for weight.

For particulars of these trials, and every information respecting the patents, apply to the Managing Director, or the Secretary, 26, Martin's-lane, Cannon-street, London, E.C.

TO COLLIERY PROPRIETORS AND OTHERS.
IMPROVED PATENT COAL SCREENS,
FOR SCREENING AND TIPPING COALS DIRECT FROM THE
PIT WAGON INTO RAILWAY WAGONS,

MANUFACTURED BY
JAMES MOWLE AND CO., FOUNDRY, CHESTER.

MAKERS OF STEAM-ENGINES and BOILERS, PUMPS, and all kinds of
MACHINERY for MINES.

PIG LEAD.

MESSRS. WESTON AND COLLINGBORN SOLICIT ORDERS
for SOFT PIG LEAD, which they are producing of the very best quality
Prices on application.
WORKS,—SWINFORD, GLOUCESTERSHIRE.
OFFICE,—18, PETER STREET, BRISTOL.

**DYNAMITE, OR NOBEL'S PATENT SAFETY
BLASTING POWDER,**

May now be had from
MESSRS. WEBB AND CO., CARNARVON,

Sole consignees from the patentee.

This powerful BLASTING AGENT will not explode from a spark, or concuss alone, but requires the combined effect of both, and is fired by a strong percussion cap and ordinary fuse. In a compressed state it may be fired in damp holes, or under water.

Force, SEVEN TIMES that of the BEST GUNPOWDER.

It will shiver to pieces cast or wrought-iron, or the toughest teak timber. No tamping is required. It is by far the safest explosive for blasting purposes ever discovered.

**NITRO-GLYCERINE, OR NOBEL'S PATENT
BLASTING OIL.**

THE EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.

It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.

Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.

Original Correspondence.

PROPOSED PERMANENT COLLIERY ACCIDENT FUND.

SIR.—The late deplorable accident from an explosion of fire-damp in South Wales, involving such a serious loss of life, and depriving so many families of their support, has been the means of reviving the scheme for establishing a permanent fund for the relief of the sufferers by similar catastrophes, or by those of a lesser degree. Of course, the object is to render for the future appeals to the benevolence of the public altogether unnecessary, and to ensure to the bereaved certain fixed income according to their necessities. How far this can be done by an Act of Parliament, compelling certain parties connected with the coal interests of the kingdom to be taxed for the purpose, without trenching on individual rights by exceptional legislation, is not quite apparent. The object is one which is well worthy of the consideration of those interested in our coal mines, but it is very questionable whether Parliament could be induced to deal with it, seeing that already many persons who have given a good deal of attention to the subject are of opinion that permanent funds could be best administered in districts by residents, and the money obtained by the same means. The scheme alluded to is brought forward under the auspices of Mr. Vivian, M.P., and other eminent Welsh colliery proprietors, and the mode in which it is proposed to be carried out is embodied in a notice affixed to a pamphlet recently published by Mr. Nixon, on "Coal Mines," &c., as follows:—

"A committee is being formed with a view of amending the present Mines Inspection Bill. They will endeavour to get inserted a clause giving power for the levying of rates for the purpose of forming a permanent relief fund for maimed workmen, and the widows and orphans and others left destitute in consequence of accidents in coal mines. The scale proposed is as follows:—Workmen to pay one penny per pound sterling upon the wages earned; employers to pay one-tenth of a penny per ton upon all coal raised and sold; lessors the same rate. Those rates are not definitely fixed upon, and the committee would be glad to receive suggestions from those who are competent to offer sound opinions on the subject, to be addressed to Mr. J. Nixon, 117, Westbourne-Terrace, Hyde-Park, London."

No doubt Mr. Nixon will receive many suggestions on the subject, and not few objections, not only from lessors and lessees, but from workmen also. This, to some extent, will be apparent from the fact that at the time of the great explosions of the last year or two similar schemes were propounded and discussed, only to be abandoned. Such was the case in the early part of last year, immediately after the Oaks catastrophe, when there was a proposal for imposing a tax on the coal raised, and on the colliers' wages; but it never assumed anything like a tangible shape, the difficulties at the outset, no doubt, appearing to be insurmountable.

In the first place, it appeared that there existed societies amongst the working colliers, having for their object, amongst others, the supporting of the widows and children of such of their body as were killed by accidents, or otherwise; and also for supporting members who were permanently injured. Now, there is very little doubt but what those societies would prefer the present system of independence, and being allowed to manage their own affairs, than to be taxed for the benefit of persons with whom they were in no way connected, although it might be to their own advantage. This can, perhaps, be better illustrated by what took place with regard to the Oaks Colliery immediately after the accident. Now, nearly everyone of the persons employed there in getting coal, hurrying, &c., were members of the South Yorkshire Miners' Association, which is said to be 8000 strong, and according to the rules everyone of the widows was entitled to 5s. per week, and the children up to a certain age to 1s. per week, besides an immediate allowance of some 6s. or 7s. for burial purposes. Its receipts are about 500*l.* a week, and in addition to paying 50*l.* weekly to the widows and children of the men killed by the Oaks explosion, it expends 120*l.* a week to the sick and incapable, and boasts of having during the past year assisted other trades to the extent of 6000*l.* The obligations entered into by the association—although such a wholesale loss of life could never have been anticipated—to the credit of the executive as it said, have been fully met, and men were engaged from the day after the accident looking after the wants of the widows and children. The members, also, for years to come will be heavily taxed to keep up the necessary payments. Now, it would appear a hardship if those men, desirous to do their work in their own way, and to be free from all outward influence and control, were to be taxed against their will for the purpose of doing for other districts what they have done for their own, because the colliers of South Wales and other places, when a serious loss of life took place, had nothing to fall back upon but public charity and parochial relief. In connection with the association alluded to, as well as others belonging to the mining body, it may be said that the leaders are perfectly aware of the power of numbers, and what is likely to be detrimental or otherwise to their interests; so that, with regard to a fund raised in the way proposed, the expressed opinion of some of them may be taken as significant. One of the principal, and undoubtedly the ablest, member of the South Yorkshire Miners' Association, on the question of raising a permanent fund by compulsory means, said the colliers as a body—those in Union—would oppose any measure by which they were to be taxed unless they had a certain control over the disposal of the monies they were compelled to pay. Such being the case, the other parties who would be called upon to contribute—the lessors and the lessees—would doubtless take the same view, and desire to share in giving effect to the object they were compelled by an arbitrary Act of Parliament to contribute towards. This may be looked upon as a difficulty which has no foundation, seeing that it has not been stated how the fund is to be dispensed, or what is to be the position or qualification of the almoners.

Having so far taken the working colliers' view of the subject, it would be unfair not to notice the position of the other parties it is proposed to tax. The colliery lessee's position is not always a very pleasant one, and he often has to work under great disadvantages. For instance, in the South Derbyshire district nearly the whole of the collieries have only been very partially employed for the last eight or nine months, to the great loss of the proprietor, who, in addition to the stoppage of the works, have their houses lying idle, and are at a great expense in providing for the safety of the men they have brought from a distance. It is not, therefore, likely that there has been any profits made under the circumstances, yet they would have to accept the extra tax. We have also had strikes, such as that at Staveley in the early part of last year, where some thousands of men were out, in South Yorkshire a couple of years since, and in Lancashire present, in all of which the masters, as well as the men, suffered. Again, it should be remembered that such colliery proprietors are rated to the poor, and, generally speaking, are not over favourably dealt with, so that they are enabled to relieve ordinary householders and shopkeepers, besides giving to the latter the benefit of their capital by the employment of labour. Such being the case, it is questionable whether in common fairness and honesty they should be burdened with a tax of an unexceptional character, to which no other class of the community is subjected, and which is, in fact, paying a poor rate for the maintenance of the body he finds work and pays wages to, and another rate for those with whom he has no connection. Why, indeed, he should be called upon to pay a double rate, more than the shipowner and others, is not apparent. It should also be considered that the loss caused by an explosion in a colliery entails enormous expense on the proprietor, which it takes years, if not a life-time, to recover. In the case of the Lund Hill explosion, in 1857, the cost of bringing that colliery into working order was said to be 23,000*l.*, resulting in one of the proprietors being hopelessly insolvent. At the Oaks Colliery, also, where the loss of life was the greatest known in our mining history, the actual cost of clearing the workings and sinking a new shaft will, probably, not be less than 60,000*l.* or 70,000*l.*

All those matters noticed above will have to be taken into consideration in the endeavour to establish a national permanent fund. Before, however, leaving the subject it may be well to state that a permanent fund has been established for Yorkshire, where there are 30,000 miners, or more than one-tenth of the entire body in the kingdom, at the head of which are Earl Fitzwilliam, Lord Halifax, and Lord Wharncliffe. A similar fund is being established at Talke, towards which the Mansion House Committee have contributed; and part of the surplus of the Hartley Fund has been set aside for the same purpose for the North of England, whilst the London committee have some 7000*l.* left of the money raised for the sufferers by

the Oaks and Talke explosions, which also may be looked upon as a permanent colliery fund. The question is, will the districts named desire to be extra taxed? The answer is obvious. R.

PREVENTION OF COLLIERY EXPLOSIONS.

SIR.—As a practical man and a well-wisher to both masters and underground working men, I may be permitted to make a few remarks upon this subject. I have been a practical managing mining man from my earliest childhood up to this time, and, as I was born in 1795, I have had some experience. I would let bygones be bygones, but one and all should do his best to endeavour to avoid explosions for the future. Like many practical men, I never did like a safety-lamp, nor yet any works where a naked candle was not safe. Instead of which, why not pursue the proper system to avoid such awful calamities by explosions as have happened, especially within the last 10 years? Facts are facts, and we all know that there are none more blind than those who will not see. Many honest-meaning men come to a wrong conclusion by being led by theorists instead of practical workers, yet practice and theory, hand in hand, can accomplish much, and likewise avoid much wrong. It is my opinion that many poor unfortunate who have so recently been cut off by explosion have been made to bear the blame of the living—i.e., the masters. Many poor, thoughtless, unprotected ignorants have been cruelly committed for various terms of imprisonment for inadvertently exposing their naked lights, so as to cause danger, when with due and proper care such danger and great calamities could have been avoided in a very great measure, and that particularly in new works. In one of our greatest calamities, and where destruction of lives were many, several of the surviving colliers were committed to Monmouth, some for smoking and some for exposing their lights. Is it unreasonable, then, to ask what is to be said of a powerful steam-engine underground, and working alongside these poor men sent to prison for exposing their lights, when such a (prior condemned) dangerous monster ought to do its work on the surface, in the open air, as pointed out the first day it worked? Singular to say, nothing was said of this engine at the inquest, though both overmen and engineers knew of it, and, fortunately for them, the poor dead were silent.

May I ask, are overmen, engineers, and surveyors fearful of losing their situations, or how is it that—although it appeared in print when the accident was first announced that at that colliery, in the north part, they had several miles of roadways laid, and had three or four steam-engines at work underground at the time, about which not a single word at the inquest appeared—the cause of ignition could not be accounted for? Why was not a word further said respecting such engines? By keeping steam-engines to do their work in the open air (their proper place), and with limited workings properly ventilated, it would be much to the benefit of mineral masters, and afford great security to the underground working men.

Near Newent, in Gloucestershire, my father had his engine on the surface for winding coal up a dipple, at an angle of 45°, and worked wells with a frame and roller fixed at the brow of the inset bottom of the pit. Unlimited workings form one grand mistake on the part of proprietors: I speak from experience. Their cheapest, safest, and most lucrative and lasting plan is to adopt limited workings, with proper ventilation, thus avoiding explosions, unnecessary statements, trouble and expense, and above all, securing safety to working men, without the Government Inspector and other officials, which such unbounded workings require. Depend upon it it is cheaper, easier, safer, and better to confine from 100 to 200 acres or so for each pair of pits to work out, working either to a barrier or to a walled division to the next pair of pits, and to suffer no communication whatever of one pair of pits with another; but for each pair of pits to connect together alone, more particularly should fire-damp exist. I maintain it by experience that it is less dangerous and more profitable to sink pits with limited workings, than to bear the regular necessary outlay for keeping extensive roadways in repair.

About the year 1818 or 1819 a gentleman named Ryan, considered the most practical skilful man of the day for encountering fire-damp (then called wild-fire), was employed much by Lord Dudley, and most other thick coal owners in the Dudley district: he was termed the Fire King. For a length of time I was under the tuition of Mr. Ryan prior to my engagement for the management of the Carrick-on-Shannon Coal and Iron Mines, under the Letouche Company, but owing to discontent in Ireland it was discontinued. One of Mr. Ryan's plans was chambers, or top headings, for the accumulation of gas, which, by firemen kept for the purpose, was each morning ignited before the colliers went down to work. At Bumblehole Colliery, now the British Company, a report like unto thunder was most mornings to be heard when the fire-damp was being ignited by a fireman, with a wet suit of flannel, and a long rod with a light, and he would then lie down out of the way of it. At that time at a thick coal pit on the right-hand side of the road leading between Round Oak and Hawley Hall (I believe Lord Dudley's, at which fire-damp was so prevalent and dangerous that the one side was walled off with brickwork, whilst the opposite side was worked out), and on the last day of working on the exhausted side, and when the men cleared up the place, sending out all the coal making boulders, the chartermaster, named Joseph Pott, sent a man up for their allowance, and whilst he was away he (Pott) asked the men to make a breach in the wall, but all refused, and with an iron bar he made a breach himself; the gas in an instant ignited with a terrific explosion, by which the poor man with the drink, then going down, was met, blowing him a great distance in the air, and rising perpendicularly he returned down the pit, a sad sight. There were 16 killed, and all buried in the same grave at Dudley Church. There was one poor fellow that as soon as on the surface set off at top speed, and ran until he dropped dead. Poor Pott when the doctor came enquired had he been to all the others, if not, for him to go, and attend to him the last. He made one of the dead, and he was satisfied who was to blame, by his remark. Such appears the effect wailing off had, and proves the due caution necessary to be taken. J. G.

ARTIFICIAL FUEL.

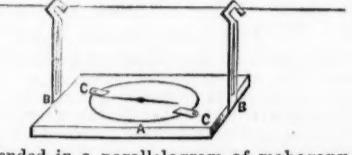
SIR.—Although so much has been written upon the desirability of utilising the small coal made in the working of collieries, it is curious to find that none of the suggestions likely to prove of practical value have been turned to account, whilst the greatest absurdities have been fortunate enough to find capitalists to give them a trial. It is an acknowledged fact that small coal can be successfully employed, by the application of inventions for the use of which the public would have to pay nothing, either in its normal state or converted into coke; and that, if converted into coke, the heat resulting from the carrying on of the coking process can be made available for the ventilation of the mine. Some ten years ago, a colliery owner in the South Yorkshire district devised a plan for coking all his small coal at the top of his up-cast shaft, the furnaces being so constructed that the whole of the return air passed around them on the way to the stack. The success obtained was complete, and that there might be no impediment to the general application of the arrangement Mr. Rogers, the inventor, took the trouble to publish ample explanations, and demanded no return whatever for the use of the invention. The coke produced was said to be of a good hard character, quite adapted for metallurgical purposes, and the pit was as perfectly ventilated as it could have been by the consumption of the same weight of coal at the bottom of the shaft, in the usual manner.

Now, the advantage of getting a sound hard coke, instead of bricks or compressed fuel, can scarcely be compared, and more particularly in such a case as the utilisation of the small coal of India. I say small coal, because as all the coal yet found there is so dirty as to require washing, it is obvious that the whole must be crushed before anything can be done with it. In connection with the Indian coal, the chief point is the separation of the impurities; and although I must admit that a modification of the jiggling machine could be very cheaply constructed, and would be very effective, but as there might frequently be some difficulty in obtaining water, one would think that some of the suggestions for air separation would be preferable. When once the coal is reduced to powder its separation from impurities is far less difficult than many suppose, and it matters little whether those impurities be lighter or heavier than the coal. The cost of an air separator would not be any greater than that of a water machine, for a wooden fan would be quite as efficient as any other, and the fan and

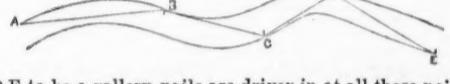
hoppers would certainly not involve a larger outlay than would be necessary to construct the wooden jiggling hatches. But does not real difficulty of employing Indian coal on the Indian railways more from the difficulty of working the coal than from treating it as it has been got to the surface? Would there not be great difficulty in getting the natives to engage in coal mining, and more especially as the extent of the works increased? I fear this is the real cause of the importation of English coal being necessary. Until this question be satisfactorily answered, it would probably be well for capital to exercise caution before attempting to bring large quantities Indian coal into the market.—Jan. 28. F. M. C.

UNDERGROUND SURVEYS.

SIR.—An instrument largely employed in Spain for mining purposes seems to be quite worth describing. It is certainly a portable and simple one in use, where exact results are required, was invented by the French, and taken with them to Algiers, and thence called the compass of the Algerine Commission. Its figure as represented in the following sketch, and consists of an ordin-



compass, A, suspended in a parallelogram of mahogany, B, to this are fixed two sights, B, on the top of which are hooks, in order that the instrument may be hung on a thread when needed. The compass is suspended in a double ring of brass, so as to hang horizontally in whatever position the parallelogram may be, but hangs vertically underneath, to which can be attached a ball and socket joint to fit it, on the top of a tripod, if required. It is then kept firm in the mahogany parallelogram by two small brass clips, C, screws to the wood. The method of using this instrument inside a mine is to suspend a string from one side of a gallery to another as tight as possible; the dial is hung on the string, and the bearing taken. To observe the difference of level in degrees it is customary to use a semicircle of 4 or 5 inches radius, with a plummet suspended to it, and which has also two hooks to hang it on the string. Sup-



A B C D E F is to be a gallery, nails are driven in at all these points, pending a string, as tightly as possible, from one to the other. The dial is then first hung thereon, and afterwards the semicircle, thus the bearing and difference of level of each point are obtained. You, of course, measure each line, and can also take the distance from each point to the opposite side of the gallery, thus obtaining the width; also, by taking the distances from the line to the roof and to the floor, you get the height of the gallery. The writer has followed the following method of recording his observations convenient:

Station.	Bearing.	Distance.	Level.	Width.	Above.	Below.
1	.....	.....	120 R.	0.60	12	.....
2	27½	3.64	R. 2.0	1.12 L.	0.48	1.12
3	26	8.66	F. 1.0	1.15 R.	0.50	1.15

The bearing is supposed to be taken from the north; the measurements are metres, or yards and decimals. In the levels R means rise, L fall; the direction of width is expressed by R right, and L left. The heights need no explanation. Similar operations can be carried out on the surface, by driving in rods or stakes sufficiently firmly to keep the strings tight. I have seen a survey of this class afterwards laid down with the same instrument, used on a table from which the nails were carefully excluded, making the side of the mahogany parallelogram serve as a ruler, and placing the instrument in the exact position it occupied in the actual survey. This method has the vantage of great simplicity.

Of course the instrument just described is only suitable for limited distances, but for all ordinary mining operations it is amply sufficient; indeed, the common system of taking a centre line with candles, when the gallery makes many turns, is more likely to lead to error; besides the dial referred to can be hung in many places where a tripod cannot be introduced.

DE GUINES.

THE NORTHAMPTONSHIRE IRONSTONE.
SIR.—Frequent reference having been made in the *Mining Journal* to the ironstones of Northamptonshire, and to the probable effect its development upon the prosperity of the county, I may be permitted to make a few remarks upon the subject, which will doubtless be interesting to many of your readers. It is now nearly 20 years since it first became generally known that Northamptonshire was rich in ironstone, and the stir it caused in this district, in which I am ironmaster of 28 years standing was really extraordinary. I well remember the effect it had upon myself and others at the time. We were then labouring under very great advantages, as we are at present time. Railways were then opening up in all directions. South Wales was making iron very cheaply; Scotland was manufacturing thousands of pig-iron annually, and converting it into bars, &c.; North Staffordshire was just beginning to give substantial evidence of its enormous mineral resources; Shropshire was making rapid strides; and Derbyshire and other minor districts were gradually opening up; whilst Yorkshire and Cleveland were, as it were, lying dormant.

At that time the Northamptonshire ironstone was considered by great many to be just what was wanted to assist us in making iron at a cheap rate, so as to enable South Staffordshire to go into the market on equal terms with our competitors. But, alas! the ironstone did not arrive—the first attempts made in South Staffordshire were not altogether successful, and the anticipations of the trade generally were completely upset; not because the quality of ironstone was such as to prevent good results being obtained, but because the mode of treating the ore was not at all understood. An important material, however, was not to be allowed to go unheeded for about that time Messrs. Butlin commenced, surrounded as they were by difficulties, to make pig-iron, the first series of experiments being made at their little furnace at the East End Ironworks, Wellingborough. But what was to be done with the pig-iron made was a question often presented itself. Some tons were made—I think about 150 tons—and some of it was offered to us by that firm. The purchase of 20 tons was agreed to, but when the iron arrived at our works we refused to take it in, on account of its broken and rough appearance. Messrs. Butlin, however, had then in their employ an old workman of ours, a puddler, whom they brought down to our works, and he prevailed upon us to receive the pigs, and asked us to allow him to work up a few heats. We consented, and the results were highly satisfactory; it worked well, and produced a fair sample of merchant bars, &c. We were so pleased with the results that we purchased all the stock they then had in hand, and by sending a few 5-ton lots to several of our friends we were enabled partially to introduce the Wellingborough pig-iron into the Staffordshire district. Since that time we have worked up about 13,000 tons, and we are now using it largely, with good results. Others besides ourselves are likewise using it, one firm that I know having consumed 15,000 tons, and they are still using it largely. The Northamptonshire pig-iron is also first-class for foundry purposes, and is being used for conversion into hollow ware, and all the class of casting called fine casting; it is, moreover, a very good iron for rolls, being very uniform, and second to none for closeness of grain and clearness of surface. We have made many samples at intervals for testing the tensile strength, such as cable bars, merchant bars, boiler-plate, hoop iron, sheet-iron, and wire rods, and I venture to say there is not less in quality than any iron made in either England, Wales, or Scotland. I have no possession a sample of boiler-plate that stood a test of 34 tons to the square inch before it broke: the Government test is 23 tons. I have also a 1/2-inch chain that stood a test of 9 tons before it gave way, and the links are so pulled one into the other, that it appears

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—J. Phillips, Jan. 29: We are driving by the side of the lode in the 90 and the 75 east. The lode in the 62 winze is 2 ft. wide, producing about 3 tons of ore per fathom. Our stope and pitches throughout the mine continue to yield about their usual quantity of ore.

BOTTLE HILL.—J. Eddy, Jan. 30: Main Lode: At Thomas's pitch, in the back of the 12, west of new shaft, the lode is about 5 ft. wide, and producing moderate stamps work. At Wilmett's pitch, in the back of the 12, the lode is about 5 ft. wide, composed of gossan, mundic, and tin; the men working on this lode are making wages.—South Lode: The lode east of shaft, in the 12, is about 3 ft. wide, containing peach, pyrite, copper, and tin; these men are making wages, although keeping the end going at the same time at the same tribute.

BWADRIN CONSOLS.—R. Northey, Jan. 25: The lode in the 10 fm. level is 3 ft. wide, and worth 1 ton of lead ore per fathom. The lode in the 25 fathom level is worth 13 cts. per fathom. The lode in the rise in the back of this level is 4 feet wide, and worth 1 ton 2 cts. per fathom, and up 10 fms., towards the 10 fm. level. No change in the 35 fm. level west since I last reported. The lode in the 45 fm. level east has been disorderly for the last 10 feet driving, but at the present time it is looking more promising for lead ore. The stope on an average will yield their usual quantities of lead ore. In the dressing department everything has been carried on as fast as the stormy and unsettled weather has allowed us. We have about 20 tons of lead ore towards another sampling. I have been to Wrexham in search of the large pump for bringing in the water for dressing, but could not meet with any second-hand ones; the foundry has promised to send me an estimate this week for new ones.

BWLCH CONSOLS.—R. Northey, Jan. 27: The lode in the 30 is 6 ft. wide, and worth 2 tons per fm. The three stope in the back of the same level are worth 1 ton 1/2 ton of lead ore per fm. The lode in the 40 is 3 ft. wide, and worth 1 ton 5 cts. per fm. The stope in the back of the same level are just the same as last reported, worth 1 ton 5 cts. per fm. The lode in the 50 has improved; it is 3 ft. wide, and is worth 1 ton of ore per fm. The lode in the 60 is 3 ft. wide, carrying a mixture of ore. The lode in the 70 is 4 ft. wide, and improving, worth at present 1 ton 3 cts. per fm. We sampled on Wednesday last 50 tons of good quality ore. I am glad to congratulate you on the daily improvement of the mine, and to say that all our operations are going on satisfactorily.

CALDBECK FELLS.—W. Francis, Jan. 24: In the 90 west, on north lode, we have passed through a good bunch of ore since my last report; the lode at present is worth 10 cts. of blue lead per fathom; driving by six men, at 51. 10s. per fathom. The lode in the shaft sinking below the 90 west, on caunter lode, is worth 16 cts. of blue lead per fathom; sinking by six men, at 51. 10s. per fathom. Dobson's stope, in the back of the 90 west, on caunter lode, is worth 18 cts. of copper ore per fathom; stope by four men, at 47. per fathom. Hodgson's stope, in the back of the 80 west, on caunter lode, is worth 8 cts. of blue lead per fathom; stope by two men, at 47. per fathom. Moffat's stope, in the back of the same level, is worth 18 cts. of blue lead per fathom; stope by six men, at 47. per fathom. Lamb's stope, in the back of the 80 east, on south lode, is worth 8 cts. of blue and grey lead per fathom; stope by three men, at 51. 10s. per fathom. Wilkinson's stope, in the back of the 70 west, on the north lode, is worth 20 cts. of blue lead per fathom; stope by four men, at 51. 10s. per fathom. There is no change worthy of notice in the 60 west, on north lode; driving by six men, at 71. 10s. per fathom. In Robinson's rise, in the back of the 60 west, we have risen 10 fms., and are now driving east in order to hole to the 50; driving by four men, at 61. 6s. per fathom. The lode in the 30 west is impregnated throughout with copper, lead, and blonde; driving by six men, at 81. 10s. per fathom. We expect in about 3 fms., driving to cut the south lode in the cross-cut driving south from the 30 west; driving by four men, at 81. 6s. per fathom. Arbridge's stope, in the back of the 30 west, is worth 15 cts. of grey lead per fathom; stope by seven men, at 31. 10s. per fathom. Hewer's stope, in the back of the same level, is worth 8 cts. of blue and grey lead per fathom. Nicholson's stope, in the back of the same level, on middle string, is worth 13 cts. of grey ore per fathom. The lode in the intermediate level east, at Mexico, is discharging a strong feed of water, and is impregnated with lead ore, but not in sufficient quantity to value; driving by four men, at 31. 10s. per fathom. We have erected the shed over the new air-shaft west, and have commenced sinking the same, and are now at a depth of 3 fathoms. We are driving the shallow level west in order to meet the above shaft; driving by four men, at 31. 10s. 6d. per fathom. The weather has been very severe lately, but, should it prove favourable, we hope to have ready for sampling at the end of the present month from 30 to 40 tons of lead and 10 tons of copper ore.

CAPR CORNWALL.—Richard Pryor, Francis Hosking, Jan. 29: The lode in the 70, west of engine-shaft, is still large, and composed of mundic, with stones of copper ore. At the other places are not the same as when last reported on Saturday next being our pay and settling-day, a full report shall be sent you.

CARADON AND PHENIX CONSOLS.—W. Johns, Jan. 25: It is very gratifying for us to see that in the 60, on No. 1 lode, west of the engine-shaft, as the end is advancing the lode is improving, containing abundance of mundic, fluor-spar, blonde, and more copper ore than we have hitherto seen in it, a kindly lode in the 60 fm. level cross-cut south we have intersected a branch crossing the end, containing fluor-spar, spotted with copper ore, and, doubtless, it is a split from No. 1 lode; we are forcing on this cross-cut with all energy to see No. 2 lode. No. 2 lode, in the 30, west of the eastern cross-course, is without any alteration to notice since last reported on. The lode we have met with in the adit level, north of No. 1 lode, the former company had not opened out on it, therefore we have a pare of men engaged cutting through it, containing a pretty deal of mundic and capel, but so far we cannot tell its exact size, but hope to in our next report.

CARADON CONSOLS.—S. Bennetts, Jan. 23: During the past week there has been but little done in cross-cutting at the 75, the men having been employed timbering the shaft in a few places where necessary. In the 68 west the lode continues about the same width as last reported, but towards the back of this end is not so ore.

CEFN BRWYNO.—J. Pauli: The 92, going east, is still looking well, yielding 1 ton 12 cts. of ore per fm. All other points without any change to notice.

CHANTICLEER.—W. Wasley, Jan. 30: Last Saturday I set the 110 yard level to drive west of shaft, at 35s. per yard, and 80s. per ton of ore, the men to pay for drawing the stuff and all other costs. The lode in the end is from 20 inches to 2 feet wide, composed of clay, spar, &c., and yielding occasional lumps of ore, and from the very kindly appearance of the lode, as well as the ground about it, we may soon expect an improvement, especially as we are now just entering the fall in the ground seen at the surface, which will, no doubt, prove to be favourable to the lode.

CHIVERTON MOOR.—J. Juleff, W. Benets, Jan. 30: The engine-shaft, sinking below the 75, is down 9 feet. The ground in the 75 fm. level cross-cut south continues fair for progress. The 65, west of engine-shaft, is worth 5 cts. of lead per fathom. In the 65, east of engine-shaft, the lode is large, and producing stones of lead. In the 65 west, at the flat-rod shaft, the lode is 5 ft. wide, yielding saving work for lead. The 65 east is at present unproductive.

COLQUITE AND CALLINGTON UNITED.—J. Evans, T. Doidge, Jan. 30: The lode in the 20 north has a very promising appearance, and we expect in a few fathoms driving to meet with the shoot of ore going down in the Colquite shaft. The lode in this shaft is large, producing silver-lead, mundic, and gossan, and a more promising-looking lode cannot be found at the depth, being only 5 fathoms below the adit.

CORNWELL CLAY AND TIN WORKS.—W. H. Willcock, Jan. 30: The works were stopped here for a time, from the frost and other causes, but are now resumed, the bed of clay remaining as good as last reported, in fact, better in depth. We sent off a cargo of bleaching clay about a week back, but have not heard of its arrival, we could not get the cargo ensured during the then stormy weather, we are, therefore, anxious for its safety. This will turn out well during this year.

CRELAKE.—W. Skewis, W. Hooper, Jan. 23: We have not intersected the lode under the slide in the 62 west, but we hope to do so in a few days. In the winze sinking below this level the lode is 3 ft. wide, worth 7s. per fathom. The lode in the rise in back of the 50 west, is 2 ft. wide, worth 4f. per fathom. In the 40 west the lode is 2 ft. wide, composed of mundic, spar, and copper ore, worth 4f. per fathom. The ground in the cross-cut north from this level is considerably harder, and thickly intermixed with mundic and copper. The lode in the 28 west is 4f. ft. wide, worth 30s. per fathom. The lode in the rise in back of this level is yielding saving work for copper and mundic. The stope throughout the mine are without any change to notice.

DALE.—R. Nines, Jan. 23: Everything at the mine is going on as well as can be expected, and the vein is yielding a fair quantity of lead and blonde.

R. Nines, Jan. 24: The works are going on pretty well, and the vein is looking most promising.

R. Nines, Jan. 27: I estimate we have now broken about 20 tons of lead and a small quantity of blonde, and the vein, on an average, is worth 70s. per fathom.

DRAKE WALLS.—T. Gregory, Jan. 27: About a fortnight since we set to work 24 heads of the new steam-stamps, and on Saturday last we completed and set to work the other 24 heads, all of which work well. Since the wet weather has set in we have also been able to do a little better from the water-stamps. On Thursday last from these stamps we sold 84 tons of tin ore, realising 437s., and we shall soon be able to make regular monthly sales, sufficient not only to meet our current costs, but to liquidate the outstanding liabilities incurred in the erection of the new machinery, without, I hope, making a call on the adventurers; this will, of course, much depend on the price of tin, but taking the present price, about 54s. per ton, with a probability of an improvement, we have no fear but what we shall be able to realise those expectations on a proper development of the mine. The branches discovered some time since at the adit level south continue productive; since then we have also by cross-cuts at the 30 and 50 intersected them, of a productive character, varying in value from 12s. to 16s. per fathom. We shall require some little time to communicate and lay open ground from the 30 to the 50, after which we shall with great advantage be able to bring to surface this tin-stuff, to be mixed with the enormous accumulation of tin halvans and skimpings now at surface, which we believe will be sufficient to keep both steam and water-stamps constantly at work, and will ensure us good returns; and with a proper development of our new discovery on the south tin ground we hope, by the erection of the new machinery, Old Drake Walls Mine will be in a more prosperous position very shortly than it has been for years past.

EAST CARN BREA.—J. Richards, Jan. 28: The lode in Thomas's engine-shaft is 2 feet wide, composed of capel, quartz, mundic, and copper ore, worth for length of shaft (12 feet) 3 tons of ore per fathom.—Thomas's Engine-shaft.—No. 3 Lode: In the 80 east the lode is 2 feet wide, consisting of capel, quartz, mundic, and good stones of copper ore. The lode in the 80 west is 4f. ft. wide, and consists of quartz, capel, fluor, mundic, and saving work for both tin and copper ore. There has been nothing done in the 70 east since last report. The lode in the 60 east is 1f. ft. wide, consisting of quartz, capel, mundic, and a little copper ore. There has been nothing done in the 50 east since last report. The lode in the 50 west is 1f. ft. wide, composed of capel, quartz, mundic, and a little copper ore.—Buckley's Shaft.—No. 6 Lode: In the 60 east the lode is 1f. ft. wide, consisting of capel, quartz, mundic, and a small portion of copper ore. The lode in the 50 east is 1f. ft. wide, composed of capel, quartz, mundic, and very fine stones of tin ore.

EAST DARREN.—Jan. 28: Taylor's Shaft: In the 116 east the lode is 6 feet wide, producing fully 2 tons of lead ore per fm. In the 104 east the lode 1f. ft. wide, improved for lead, producing 1f. ton per fm. In the 92 east the lode is 4 feet wide, yielding 1f. ton per fm. In the 92 west of boundary, the lode is 1 yard wide, producing stones of lead ore at times, but not to value. In the 80 east the lode is 1f. ft. wide, a little improved for lead, now yielding saving work

for dressing. In the 68 east the lode is large, containing spots of ore at times, but not to value.—Reed's Shaft: In the winze sinking below the 80 west there is no change in the lode since last reported. In the new shaft at Blaencwm, the ground continues favourable for sinking. In the cross-cut north at the new pool, there has been no change in the ground as yet for any improvement. The tribute pitches continue to yield their usual quantities of ore. Our surface work progresses favourably, and we have to day sampled 75 tons of lead ore.

EAST GUNNISLAKE AND SOUTH BEDFORD.—J. Bray, Jan. 30: In the 54, west of Gard's shaft, there is no change; the cross-cut is still very hard, and letting out water freely. The water is gone down 4 ft. under the 46, and we have commenced to sink a winze under the same. I will inform you of the size and character of the lode next week. The lode in the shallow adit is very large, composed of spar, pyrite, and mundic, with strings of black ore. The lode in the rise in the back of the shallow adit is very large, but at present poor, it is composed of spar, gossan, and mundic; suspended for the present.—P.S. The men are working on the Impahm; the lode looking well this morning.

EAST LAXEY.—W. H. Rowe, Jan. 28: Since my letter of last week the lode in the 20 fm. level has widened from 1 ft. to 1f. ft., and there is a kindly mixture of quartz and copper coming in.

EAST BOSEWARN.—C. Glasson, Jan. 30: The lode in King's shaft, sinking below the 105 fm. level, is 15 inches wide, worth 10f. per fm. for the length of the shaft, 12 feet long. In the 105 fm. level, west of shaft, the lode is 12 inches wide, producing stones of copper ore. In the 105 fm. level east of shaft, the lode is 15 in. wide, worth 5f. per fm. In the 95 fm. level, west of shaft, the lode is 12 in. wide, worth 6f. per fm.; I have suspended this end for a few days, and put the men to rise in the back of this level, to hold to the stope above; the lode is 12 in. wide, worth 5f. per fm. In the 95 fm. level, east of shaft, the lode is 8 in. wide, worth 3f. per fm. In the 85 fm. level, west of shaft, the lode is 10 in. wide, worth 7f. per fm.

EAST SNAEFELL.—Wm. H. Rowe, Jan. 28: Since my letter of last week the lode in the 20 fm. level end has widened from 1 ft. to 1f. ft., and there is a kindly mixture of quartz and copper coming in.

EAST WHEAL GRENVILLE.—G. R. Rodgers, Wm. Bennetts, Jan. 29: The lode in the engine-shaft, sinking below the 110, is 20 in. wide, with black ore, and a little tin, a very promising lode; here the men are engaged getting out ground for cistern, &c., to fix a plunger-lift. The lode in the 110 west is 8 feet wide, producing both copper ore and tin, worth 10f. per fm., and front the appearance of this lode we cannot account for not having met with a bunch of ore ere this. The lode in the winze sinking below the 95 west is 2f. ft. wide, and worth 2 tons of copper ore, with good work for tin. All the other places are very kindly lode for copper. The water is not yet forced in the West Mine.

MINERA UNION.—W. T. Harris, Jan. 30: Low's Shaft: We have intersected the hanging side of the lode, and expect something by next report. Satisfaction in laying down the flat-rods from engine to new shaft, which will be completed, and all ready for sinking by the end of next week, when the lode is wide, and worth 12f. per fm., and the ground easy for exploring, and water-charged very light. In about 9 or 10 weeks we shall have sunk the 12 fathoms below adit, and have open a good run of tin ground.

MAUDLIN.—John Tregay, Jan. 25: The new lode in the bottom of the 15 fm. level is 4 feet wide, composed of gossan, quartz, spots of copper ore, and mundic.

NEW BAMPFYLLDE.—C. Hand, Jan. 30: North Lode: Capt. Pope and Co.

have been down Hand's shaft, and through the old 36 fm. level, where the

lode is 1 to 3 ft. deep. They went west 4f. fm. to the crushed end; all drive

the lode, but none of the back stopped. Then east from shaft 15 fms., to a

width of 12 ft. in which they dropped a line 7 fms. Then proceeded about 20 fms. further

through a small cross-course, and found the end crushed; the back has

partly stopped about a winze to the 20. They broke parts of the lode, and

spots and strings of very bright yellow copper ore. The lode is cut through

several places, and is 4 to 8 fms. wide, composed of black, brown, and white

with very nice quartz and gossan, interspersed with yellow copper, and

stratum looking very congenial and encouraging. No new feature in the

lodges or workings. The lode in the 102, No. 4 shaft, will probably be inter-

vening in five or six weeks.

NEW CROW HILL.—W. Trelease: The winze below the 70 fm. level was

menaced on Wednesday last, by six men, at 8f. per fm., for the month out,

ago, about 3f. ft. wide, consisting of white iron and quartz, disseminated

throughout with lead ore, but not enough to value. The same lode in the 145

fm. level is also 2f. ft. wide, of similar composition, but yielding saving work for lead.

The stopes in the back of this level, on the east side, are yielding 1/2 ton of

lead ore per fm. The lode in the 130 north, is without any material change.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, Jan. 29: The west lode, in the 145 north, is 2f. ft. wide, consisting of white iron and quartz, disseminated throughout with lead ore, but not enough to value. The same lode in the 145

fm. level is also 2f. ft. wide, of similar composition, but yielding saving work for lead.

NEW BAMPFYLLDE.—C. Hand, Jan. 30: North Lode: Capt. Pope and Co.

have been down Hand's shaft, and through the old 36 fm. level, where the

lode is 1 to 3 ft. deep. They went west 4f. fm. to the crushed end; all drive

the lode, but none of the back stopped. Then east from shaft 15 fms., to a

width of 12 ft. in which they dropped a line 7 fms. Then proceeded about 20 fms. further</p

PENHALLE WHEAL VOR.—W. H. Martin, Jan. 28: We are sinking Hollingworth's engine-shaft below the 74 with all possible speed, and occasionally meet with floors of spar running through the shaft. In the cross-cut south from this shaft, in the 74, the ground continues favourable for driving. We are in fork to the 40, at Holroyd's shaft, and preparing to send drop-lift below that level. We found the two lifts in the shaft, also in the 40 fathom level a winze, tackle, rope, kibble, tray, tools, &c., which were stated to have been left there by the old company. We have also been told that there is good tin ground left standing under the 40, which we shall proceed immediately to water, and, as by finding these lifts, &c., proved the statement correct so far as seen, this strengthens me in the opinion I have formed, that we shall find the tin ground below the 40. By the latter end of the week we shall complete the erection of the horse-whim and shaft-tackle, also the collaring, and commence the clearing of Little Ben-jamie's shaft. The tributaries are getting wages, and working well. We sold, on Thursday last, 4 tons 10 cwt., 0 qr. 2 lbs. of black tin, realising 2397. 2s. 2d.

PENHALLES.—S. Bennetts, W. Higgins, Jan. 24: In presenting you with our usual quarterly report, we beg to state that the diagonal engine-shaft has been sunk below the 60 fathom level 3½ fathoms through good tin ground, varying in value from \$1. to 1½ per fathom, the present bottom being nearly of the latter value; the water, however, being too much to make satisfactory progress without the aid of pumps, the men were, a month since, removed to the shaft above this level, so as to complete the diagonal to the perpendicular at the 40 as soon as possible. There remain 6 fathoms more to rise between the 60 and 50 fathom levels, and about 3½ fathoms between the 50 and 40 fathom levels, to accomplish this very necessary work. The 60 east has been extended only 2 fathoms, the men having been employed rising in the back, so far as they possibly could for want of air, with a view to open out some tribute ground. The lode in the end is of a very favourable character, considering its being close by a gossan and slide. In the west end, in this level, we have not as yet met with the principal part of the cross-course, but are expecting to meet with it shortly. The 50 west, on the new lode, has not been very productive during the quarter, although the lode is large, and containing occasionally some tolerably good work; 5½ fathoms have been driven in this end. The 50 west, on Cowling's lode, is not as yet communicated with the same level east on the new lode; the lode in this drivage has been unproductive. The 50 west, on Pink lode, and the 40 east, on ditto, have continued to produce some tinstuff throughout, but scarcely of paying value. The two rises above the 50, on the new lode, have proved profitably productive during the quarter, varying in value from \$1. to 20s. per fathom, and still a good lode in each. The Sunny Corner adit, towards West Pinl, has been cleared (from cliff) 180 fathoms, and an adit shaft some 17 fathoms deep for the purpose of taking up the adit water, which is now falling into the Old Pink Mine; it is important that this should be accomplished. In the Old Pink Mine, although the water has been in fork some time, the various parts of the mine are so full of stuff that very little can be seen as yet; the lode appears to be taken away down on a gossan, and westward as far as a cross-course, so that but little of the lode can be seen, and that not very productive. During the past few days the water has so very much increased that we can scarcely keep it. You are, no doubt, aware, that we have only 24 stamp-heads at work, and those only capable of being worked about half time, the other half being occupied by the engine in drawing. While we were returning a sufficient quantity of stuf to produce from 8 to 10 tons of tin per month this time for stamping was about sufficient, but now the increase of the stuff raised, together with the extra time required for stamping it, we find to be more than the stamping-engine can accomplish, without the slightest chance of increasing these returns. Therefore, as we are so much in want of such, and were offered an excellent drawing-engine, with boiler and cage complete, at a very low price, we have accepted the offer; by this transaction the value of the plant will be increased to the full extent of its cost, and will put us in a position to be able to increase our returns as circumstances may warrant. We consider the general appearance of the Penhalles Mine good, and without reference in any way to what may be discovered in the Pink Mine, fully justifies us in incurring this expense, and we suggest the propriety of commencing the building of the house for erecting the engine as soon as possible.

PRINCE OF WALES.—J. Gifford, W. Gifford, Jan. 25: To-day being our general setting, the following bargains were set:—The 65 cross-cut south is driven 5 fms. 4 ft.; in the present end we have met with another branch, about 5 in. wide; this, we think, is the same as we met with in the 55, about 4 ft. north of the main lode, but cannot say the distance between at this point, as the main lode may have taken its regular underlie south, as seen from surface, to the 45. The killas in the end is well mineralised, and moderately easy for driving; we expect to intersect the lode before the next general meeting.—Stent of bargains not out: The 55 cross-cut north to four men, stent the month, or cut the lode, at 4½ in. per fm.; this end is 2 fms. beyond the perpendicular of the lode seen at surface, and the water coming freely from the end. The 65 west to drive on the south part of the lode, by six men, stent 1 fm., at 15s. per fathom, worth 12½ per fm.; the end is near the point where the lode began to improve in the level above, and it is also looking kindly for improvement. The 55 east to six men, stent 2 fathoms, and to carry all the lode, at 8s. per fm.; the lode is not all taken down, but, so far as seen, is 4½ ft. wide, worth 90s. per fathom. We hope to have it all down close to the end by Tuesday. Three stokes in the back of the 55—the two eastern ones worth 20s. per fm., and the western one 25s. per fm.; price for stoking, 50s. per fathom for the first two, and 37 for the western one. The 45 west to two men, stent the month, at 4½ per fm.; the lode is 2 ft. wide, of a promising appearance, but of no value. A winze in bottom of the 55 east, about 4 fms. in advance of the 55, by four men, stent the month, at 4½ per fm.; the lode is 2½ ft. wide, worth 20s. per fm.; all the filling, landing, and trammimg by seven men, at 26s. per month. In consequence of cutting a large stream of water in the rise against the adit-shaft; it is suspended for the time. This we hope will drain the shaft, so as to enable us to sink the latter with greater speed, and to communicate in much less time than with rising. We hope to sample on Friday next about 140 tons of good quality ore.

REDMOOR.—T. Taylor, Jan. 30: We have no change in the north end; the ground is still hard, mixed with spar, small branches of mundic, and spots of copper ore. The south end is greatly changed; now easy for driving, and letting out a deal of water. A week ago it would cost 10s. per fm., and can now be driven for 5s.; somewhat the price of ground in Florence before reaching their lodes. We are pushing with all speed, hoping to find something by the 6th, the day for general meeting.

REINNIE LAXEY.—W. H. Howe, Jan. 28: We have this week a very favourable change of ground in the rise cross-cut above deep adit, and also a good deal of water issuing from an open joint, which will no doubt lessen the feed in the sump. The influx of water in the engine-shaft is beyond anything anticipated, and the consequence it has greatly retarded the sinking of the shaft; the ground is much changed, being very jointy, and producing beautiful stones of yellow ore, in contact with grey and purple, also mundic, prian, and friable quartz, and from present indications I think Grange's lode will soon make its appearance in Gillman's engine-shaft, and, judging from the present character of the ground, I hope to report very soon something good and substantial.

ROSE AND CHIVERTON.—J. Evans, Jan. 30: The No. 2, sinking below adit, is producing rich silver-lead, and gives every evidence of a rich lode in depth. The 40 end continues in a good lode, 2 ft. wide, worth 14s. per fathom. The 30 east is 3½ feet wide, yielding 3 tons of ore per fathom. The lode in the 30 east will now produce about 2 tons, worth 10s. per fathom. A winze below this level, west of shaft, is 2½ feet wide, yielding saving work. West Maria Lode: In taking down the lode in the 30 east, we are pleased to say that we find it to be much improved from what it was when last taken down; it is, however, not yet cut through, but so far as seen it will yield 2½ tons of ore per fathom, with good prospects of still further improvement. There is no lode taken down in the 50 east since last report, but we shall commence it this afternoon, and we are looking forward to improved results. The stoke in the back and that in the bottom of this level are easily taking 3 tons of ore per fathom. The 40 east is suspended at present, and the men are put to sink in the bottom to hole at the 30 east in back of the 50. The lode in the stoke in bottom of this level will yield 2½ tons of ore per fathom. The sinking of the new shaft below the 20 fm. level is progressing very satisfactorily, and is in very favourable ground.

ROARING WATER.—H. Thomas, Jan. 28: The influx of water in the engine-shaft is beyond anything anticipated, and the consequence it has greatly retarded the sinking of the shaft; the ground is much changed, being very jointy, and producing beautiful stones of yellow ore, in contact with grey and purple, also mundic, prian, and friable quartz, and from present indications I think Grange's lode will soon make its appearance in Gillman's engine-shaft, and, judging from the present character of the ground, I hope to report very soon something good and substantial.

ROSE AND CHIVERTON.—J. Evans, Jan. 30: The No. 2, sinking below adit, is producing rich silver-lead, and gives every evidence of a rich lode in depth.

ROSECLIFF AND TOLCARNE.—R. Pryor, T. Gundry, Jan. 29: In the 50 fm. level, east of cross-cut, on No. 3 lode, we have cut a flookan, which has heaved the lode south; the men are now engaged driving in that direction in order to meet with the same, and as soon as this part is reached it will drain the old mine from the 30 to this level, which will enable us at once to sink the old engine-shaft below its present bottom, the 30 fm. level, without the aid of any machinery. The lode in the 50 fm. level, west of cross-cut, on Nos. 3 and 4 lodes, are just the same as when last reported on. We have taken the men from the 40 east of cross-cut, on No. 4 lode, to make the necessary preparations for sinking a winze from the 30 to this level on No. 4 lode.

SORTRIDGE CONSOLS.—J. Richards, Jan. 30: The shaftmen are engaged cutting a plat at the 40, as advised in my previous report, and fair progress is being made. In the 40 west the lode yields good stones of ore occasionally. In the 40 east the lode is 3½ ft. wide and yields good saving work of copper ore.

SOUTH CONDURROW.—J. Vivian and Son, Wm. Williams, Jan. 25: In the east and west of King's shaft, the lode has increased in size, being now about 3 ft. wide in both ends, but its composition is unaltered since the last report, being friable quartz, iron and flookan, with native copper mixed throughout. In the 71 east the lode is of much the same composition as in the 52, and is about 1½ ft. wide. In the 71 west we are driving south, with the object of intersecting the tin-producing part of the lode. In the 61 west the lode continues to produce tin, worth about 5s. per fathom. The tin stokes in the back of this level are worth about 12s. per fathom. In the 51 west the lode is 1 ft. wide, containing small pockets of black copper ore. In sinking under the 30, west of Vivian's shaft, the lode is about 2 ft. wide, containing a branch of black and grey copper ore about 3 in. wide, which we hope will lead to a further improvement.

SOUTH DARREN.—J. Boundy, Jan. 25: The 70 to drive west, by six men, at 2s. per fathom; the lode here has improved in appearance, and produces a little lead and copper, but not sufficient to value. The 60 to drive west, by six men, at 2s. 10s. per fm.; the lode is 3 ft. wide, worth for lead and copper 25s. per fm.; a more promising lode than there is in this end I have not seen in this mine. In the 50 west we have again intersected the lode west of cross-course, but cannot see enough of it to state its size and value; let to six men, at 2s. per fathom. To stoke the back over the 60, east and west from the winze, by eight men, at 8s. per fm.; the lode is 2 ft. wide, worth for lead and copper 18s. per fathom. To stoke the back over the 50 west, by six men, at 8s. per fm.; the lode is 2 ft. wide, worth for lead and copper 14s. per fathom. To stoke the back over this level (the 50 west), by four men, at 8s. per fm.; the lode is 2½ ft. wide, worth for lead and copper 14s. per fathom. To stoke the back over this level (the 50 west), by four men, at 8s. per fm.; the lode is 2½ ft. wide, worth for lead and copper 14s. per fathom. To stoke the back over the 40 west, by six men, at 8s. per fm.; the lode is 2 ft. wide, worth for lead and copper 17s. per fm. The winze sinking below the 40 is down 10 fms.; I hope to communicate this with the 50 driving west about a fortnight. To stoke the back over the 30 west, by two men, at 7s. per fathom; the lode is 2 ft. wide, worth for lead and copper 11s. per fathom. The 30 west cross-cut, to drive south, by four men, at 6s. 18s. per fathom. During the month we have driven through a succession of branches containing spots of copper, mundic, &c., but not enough to value. The shallow level to drive east, by two men, at 6s. 10s. per fathom; the lode is 1 ft. wide, with a better appearance, and the ground more mineralised. We are getting on favourably with our dressing, and we shall prepare another parcel of lead for the market as soon as possible. All the machinery is in good working order.

SOUTH HERDSFOOT.—W. Goldsworthy, Jan. 29: The engine-shaft is in regular course of sinking below the 86. The ground still continues favourable, and good progress is being made. The engine and pitwork are in good order, and working well.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Jan. 25: The lode in the engine-shaft, sinking below the 30, is 18 in. wide, composed of quartz and gossan, in which we find stones of copper ore. In the 30 west we blasted a hole in the western side, where we find a branch 4 inches wide, containing good masses of grey ore embedded in quartz, but the ground is hard. The lode in the 30 east is 18 in. wide, composed of gossan, quartz, and prian—a kindly lode. The 20 in the 20 east is 3 ft. wide, of much the same character as the lode in the 30.

SUMMER HILL.—William Wesley, Jan. 20: We have about 22 tons of ore dressed, and are still busily engaged in dressing for the next sale, which will be on Feb. 13. I have set the level east of the cross-cut, north of Hale's shaft, at 22s. per yard for the month, the men to pay for driving the stuff, and all other costs as usual. The ground in the present end is taking a drop, which I consider

to be a favourable indication of our soon meeting with a run of ore in that direction. The men in the south-west level are at present engaged in stoking a piece of the side of the level, which they will finish by the end of this week, when I shall again set to them to drive.

ST. JUST AMALGAMATED.—R. Pryor, W. White, R. Wearne, Jan. 29: All the tutwork operations in these mines continue just the same as when last reported on, and the lode in Savel's engine-shaft, sinking below the 90, still maintains its size and value; this is a great point, and the 100 will soon be reached, when a valuable piece of tin ground will be opened up. Our pay and setting will take place on Saturday next, when a full report shall be sent on.

TAMAR VALLEY.—J. Goldsworthy, Jan. 30: The shaft sinking below the 10 fm. level is now down a sufficient depth for driving a 20 fm. level, which will be commenced on Monday next. The present appearance of the lode is most satisfactory, and I am of opinion that we are approaching a good course of silver-leaving, having sunk right through the elvan course.

TIN HILL.—W. H. Willcock, Jan. 30: Our works have been delayed here for about a week, in consequence of some obstruction in the lifts, preventing the forking of the water; the whole had to be taken up and examined. The men were able to resume breaking tinstone yesterday in the 10 fathom level, where the stuff still continues of the same character as before. We shall send away to the smelters about 2 tons of the to-morrow, and sales will now be regular.

TREVENEN AND TREMENHEERE.—J. Medlyn, C. George, Jan. 29: The 24 fathom level end yields saving work for the stamps. No lode has been taken down in the 19 fm. level end since the last report, but we shall begin to take it down to-morrow; it was last valued at 14s. per fathom. The stope in the back of this level is worth 2s. per fathom, and cuttings will take place on Saturday next.

VIGRA AND CLOGAU.—W. J. Holman, Jan. 30: The lode in the 18 fm. level end is large and disordered; we are cross-cutting south to look for the main part. The 27 fm. level end is worth 20s. per fathom. The two stokes in this back are worth on an average 2s. per fathom. The stope in the 16 fm. level is worth 4s. per fathom for a short length. We have 17 men on tribute, at 11s. 8d. in 11.

VIGRA AND CLOGAU.—W. J. Holman, Jan. 30: The lode in the 18 fm. level end is of a very favourable character, considering its being close by a gossan and slide. In the west end, in this level, we have not as yet met with the principal part of the cross-course, but are expecting to meet with it shortly. The 50 west, on the new lode, has not been very productive during the quarter, although the lode is large, and containing occasionally some tolerably good work; 5½ fathoms have been driven in this end. The 50 west, on Cowling's lode, is not as yet communicated with the same level east on the new lode; the lode in this drivage has been unproductive. The 50 west, on Pink lode, and the 40 east, on ditto, have continued to produce some tinstuff throughout, but scarcely of paying value. The two rises above the 50, on the new lode, have proved profitably productive during the quarter, varying in value from \$1. to 20s. per fathom, and still a good lode in each. The Sunny Corner adit, towards West Pinl, has been cleared (from cliff) 180 fathoms, and an adit shaft some 17 fathoms deep for the purpose of taking up the adit water, which is now falling into the Old Pink Mine; it is important that this should be accomplished. In the Old Pink Mine, although the water has been in fork some time, the various parts of the mine are so full of stuff that very little can be seen as yet; the lode appears to be taken away down on a gossan, and westward as far as a cross-course, so that but little of the lode can be seen, and that not very productive. During the past few days the water has so very much increased that we can scarcely keep it. You are, no doubt, aware, that we have only 24 stamp-heads at work, and those only capable of being worked about half time, the other half being occupied by the engine in drawing. While we were returning a sufficient quantity of stuf to produce from 8 to 10 tons of tin per month this time for stamping was about sufficient, but now the increase of the stuff raised, together with the extra time required for stamping it, we find to be more than the stamping-engine can accomplish, without the slightest chance of increasing these returns. Therefore, as we are so much in want of such, and were offered an excellent drawing-engine, with boiler and cage complete, at a very low price, we have accepted the offer; by this transaction the value of the plant will be increased to the full extent of its cost, and will put us in a position to be able to increase our returns as circumstances may warrant. We consider the general appearance of the Penhalles Mine good, and without reference in any way to what may be discovered in the Pink Mine, fully justifies us in incurring this expense, and we suggest the propriety of commencing the building of the house for erecting the engine as soon as possible.

WESTMINSTER.—F. Evans, Jan. 29: In driving out for Ja gallery east of Thompson's shaft, in the 76 fm. level, the lode is 5 feet wide, and will produce ½ ton per fm., and improving. In the same level west we are rising in the roof, and hope to get through to the 70 before the end of another week; we shall then stop the western ore ground, which, on an average, will produce 2 tons per fm. A stope over the back of No. 1 level is still yielding good stamps work. In the bottom of No. 5 sink the lode is rather narrow; this shaft will yet have to sink 3 or 4 fms. more before much gold can be expected, unless the branches change their underlie, and fall into the main lode sooner than expected. The stope over the back of No. 1 level is still yielding good stamps work. In the cross-cut south from No. 1 level there is no change. The lode in the drivage east from No. 1 shaft is 4 ft. wide, and altogether looks well. At the Vigra Mine there is no change to report. The drainage of the Old Clogau Mine is going on well. At the reduction works the whole of the stamps are at work.

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WHEAL EMILY.—J. Rabey, Jan. 28: Since sending report last week we have collared up David's shaft, and fixed windlass to prepare to cross-cut north about 2 fms., to intersect the silver lode 82 fms. east of our present workings, where we have a good lode. In my opinion, there is little doubt but what we shall find the lode equally rich when cut, particularly as the strata are similar to what we are now working in. The lode in the adit is looking well. We are continuing to raise and dress plenty of silver ore, and shall soon be ready, according to promise, with several tons of it for sale. Our pay-day will be on Feb. 1.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 25: We have no material change to notice at the 130, either east or west from the engine-shaft, since our former advice. At the 120 west, in the back of the level we have a good branch of tin, worth fully

that the President (General Patina) would be very glad to assist the company by every means that lay in his power, and, with everyone else, was eagerly looking forward to the completion of the company's line to Aroa, so that the great quantities of inland produce might be sent by way of Aroa. General Patina has just purchased a large estate near the boundary of the company's property, on the road to the mines, which makes him more anxious. A good road can be easily and cheaply formed from Barguilimito to Aroa—in fact, the Bolivia Mining Association formed a good road, for the purpose of bringing provisions, which they found they could purchase much cheaper in the Barguilimito district. The health of the men has very much improved. I trust you will soon send an English doctor here. I have had for the last fortnight a severe dysentery, which has rendered me so weak that I find it a very difficult matter to write this report, and I am afraid if I am not better in a day or two that I shall be compelled to place myself under a doctor's care. I spoke to you about powder and safety-fuses just after I arrived; we are nearly out, and can procure none here.

[For remainder of Foreign Mines, see to-day's Supplement.]

MINING NOTABILIA

[EXTRACTS FROM OUR CORRESPONDENCE.]

NORTH WHEAL CROFTY.—A great improvement has taken place at this mine in the 183 fathom level, east of Praed's shaft. At the meeting, in December, this point was passing through the cross-course, and of no value; subsequently the lode became worth 25*l.*; in a short time it improved to 45*l.*, 50*l.*; and now it has increased, it is said, to nearly 100*l.* per fathom. The other levels will now be pushed on, and if found good will enable this mine to take a leading position. There are two other points of interest to come off—the 120 south, east of Rule's shaft, where the south part of Reeve's lode will probably be intersected; and the 196, east of Praed's shaft, which has not yet got under the rich tin ground in the level above. A winze will, probably, be sunk below the 183, to prove the value of the lode in depth.

WHITEWELL LEAD MINE.—On Thursday I attended at the sale room of Mr. H. C. Walton, of Fishergate, Preston, to see the result of sale of 10 shares in the Whitewell Lead Company, Clitheroe. By reference to the Dividend List you will find the mine in 3000 shares, with 5*s.* per share paid. The shares were sold to a *bona fide* purchaser at 18*s.* 5*p.* per share. This augurs well for so new a company.

WEST WHEAL FRANCES.—The mining world has been startled by the discovery of a lode in the 85 west, 22 ft. wide. The value of the part driving on (9 ft. wide) has increased from 40*l.* to 60*l.*, and latterly to 90*l.* per fathom. The 77 east is also showing good indications of improvement. This, with the 95, is being pushed on as rapidly as possible, besides which the lode at the shaft, below the 108, is worth 20*l.* per fathom. This splendid improvement must be very gratifying to Captain C. Thomas and those associated with him in the management, as well as to the shareholders, who have so splendidly found capital, and placed confidence in the scientific knowledge of the agents. Other points of importance are shortly expected to come off, and it appears pretty evident that West Wheal Frances is destined to be one of the prizes of 1868. During the past quarter some 33 tons of tin were raised and sold, and from the improvements which have taken place since the meeting it is supposed the returns may be doubled, which would suffice to pay very handsome dividends upon the small number of shares into which the mine is divided.

SOUTH TREVENNA.—An important operation has been completed here, the connecting the rise in No. 2 tin lode from the 20 fm. level with the winze sunk from the adit level, which is 25 fathoms from surface, laying open hundreds of fathoms of good ground that can be stopeled away on tribute at a cheap rate. This has given much satisfaction in the district, in consequence of the new management having only taken this piece of work hand in hand during this month, the former company not being able to accomplish it, but came to grief in the attempt, the present proprietors would appear to have little else to do than to erect sufficient stamping-power to return as much tin as they like.

NORTH WHEAL CROFTY.—The lode in the 183 fm. level, east of Praed's shaft (which may be considered the heart of the mine), is valued by the agents as worth fully 90*l.* per fathom for 6 feet in length and 6 feet in height. This is certainly a most important improvement, indeed it may truly be termed an "unexpected discovery," which will enable the company to increase their returns, and thereby wipe off the debit balance without making a call, which certain prominent dealers, though very small shareholders, strongly advocate.

TAMAR VALLEY.—The works at this mine are progressing most satisfactorily. The main shaft sinking on the course of the lode is now deep enough for commencing to drive the level south. Capt. Goldsworthy, the agent, is sanguine of meeting with a good deposit of lead at an early date.

PENHALLE WHEAL VOR.—Those interested in this property have cause for congratulation in attesting the correctness of the information given by an old tributary of the district as to finding, in the 40 fm. level, a run of rich tin ground. That level has just been unwatered, and, in accordance with the statements of the old miner, two lifts, winze-tackle, and other tributaries' tools have been found. He毫不hesitatingly states that a fine run of rich tin ground will be found when the water is in fork and the level cleared. This will be accomplished in about six weeks from the present time.

STEEPLE ASTON IRON ORE COMPANY.—The works are being pushed rapidly forward, and two of the directors are down this week arranging various matters, with a view to the permanent and profitable working of the undertaking. A large sale of ore is expected to be made immediately. The investment is evidently going to be a fortunate one for the shareholders.

EBURY.—Some splendid stones of ore from Evans's shaft may be seen at the offices of the company. The lode continues to improve, and there can be little doubt but that the shaft is now entering upon one of those permanent runs of ore which never fail in this district to make valuable and profit-making mines.

CEFN BRWYNO.—The 92 fm. level east still continues worth 1 ton 12 cwt. per fm. Other places look well.

Several mines in the Tavistock district are looking well. **BEDFORD UNITED MINES**, for one, stand prominent, and are looking well at the north shaft, and bid fair to pay dividends for years. **CRELAKE** can pay a dividend at the February meeting. What a great change in this mine! This is good for labour, as well as the trade of the town.

At **WEST PRINCE OF WALES** the operations are going on very satisfactorily, and the lode has all the appearance of the Prince of Wales, and no doubt the same results will follow.

GREAT WHEAL VOR.—The lode in the recent discovery at Edwards's shaft is getting larger. Some fine stones of tin were brought up during the week. The 204 and 194, driving east and west of Metal shaft, are producing well, and maintain their value.

NANGILES.—Prospects continue to improve. The lode in the 130 is looking better. There is more ore coming in the lode; the south part is 18*ft.* wide, and the north part 3*½* feet wide. The quartz is getting softer, and the men have met with a vug, with rich ore all round it. In the north part of the lode they will have a rich lode in this level soon. The rise and stope over the 120 are each worth 12*l.* per fathom, and the lode in the 120 is improving. The ground in the 90 fm. level cross-cut has also improved for driving.

At **OKEF TOR** the bi-monthly samplings show a favourable progress; they have risen from about 500*l.* to 650*l.*, and the next sampling the agent, in his report to day, expects will amount to 1000*l.* and it is contemplated that they will progressively increase from this time forth, for besides the great resources on the north lode, the south lode is now so far developed in the 50, 65, and 80 fm. levels, as to prove that an extensive course of good quality yellow ore is in existence in its various parts, chiefly found on the south or hanging wall; yet this remarkable lode, which is nearly 30 ft. wide, and chiefly composed of granulated quartz, bears large veins of copper ore on the north part, and is interspersed throughout with yellow ore in places.

ROSE AND CHIVERTON UNITED.—The accounts received from this mine are of a very cheering character. A portion of ore from the new lode has been assayed, and, although roughly dressed, proved to be worth 19*l.* per ton. The frost has interfered with the samplings, the next of which will, however, take place in February. The development of this property is being watched with great interest in the neighbourhood.

[ADVERTISEMENTS.]—The operations at **WESTMINSTER** are being carried on with the greatest vigour, and everything done to make this a permanent dividend property.

EBURY.—The lode in the shaft continues to improve, and this mine may now be looked upon as a certainty.

[Full particulars of the meeting at **CENTRAL SNAILBEACH** will appear in next week's Journal.]

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for Dec. is 23. They have consumed 1436 tons of coal, and lifted 10⁵ million tons of water 10 fms. high. The average duty of the whole is, therefore, 49,500,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:

Carnon Mines—Michell's 72 in.	Millions	49·9
Chiverton Moor—70 in.		60·1
Cook's Kitchen—50 in.		51·3
Dolcoath—Harriett's 60 in.		52·2
Great North Downs—Sleighton's 70 in.		52·0
North Wheal Crofty—Trevenson's 60 in.		59·2
West Caradon—Elliot's 50 in.		55·4
Provident Mines—40 in.		53·3
South Wheal Frances—Marriott's 75 in.		57·7
West Wheal Seton—Harvey's 88 in.		71·9
Wheal Seton—Tilly's 70 in.		61·8

MINING IN EASTERN NEVADA.—The news from this district continues to be very encouraging. The Diana Mine, on Lander Hill, has improved 32*½* tons, and the assay of the pulp gave 27*l.* per ton: one parcel gave 284*l.* per ton. The Magnolia Mine is producing superior sulphurites; 55 tons yielded four bars of bullion, worth 242*l.*. In two weeks ending Dec. 5 the North Star Mine returned 46,500 ozs. of bullion. The Old Dominion Company's mill has made its first return, of 6000 ozs. of bullion. The Savage Mining Company president's report shows the gross product during the year of the enormous sum of \$3,000,000 in bullion, and dividends to the amount of \$1,400 per foot. In the twelve months the mine has returned a clear profit of \$1,120,000 in specie to its owners, leaving a balance of \$149,201 in the treasury. The gross product of the mine up to the 10th of July last was A6,513,378. The dividends for the past year have been equal to an interest of 10 per cent. on a par value of \$14,000 per foot, or share, of the mine. The new and peculiar mineral of silver, which was first observed several months ago, and named Stefeldite in honour of the discoverer, has also been discovered in the western section of California. It was first observed in the Empire district, and subsequently in the districts of Silver Bend, Northumberland, Hot Creek, Columbus, and Volcano, and quite lately in the Cortes district. It appears to be the chief bearer of silver in all the districts lying in the southern section of this State. It has also been discovered in the Blue Spring district, Mono county, California.

* * With this week's Journal a SUPPLEMENT SHEET is given, which contains—Mr. Warington Smyth's Lectures, XXIII. to XXVI.—Geological Society of London—Manchester Geological Society—Report of meeting of Association of Mine Agents of South Staffordshire and East Worcestershire—the Mineral Resources of Turkey—Foreign Mining and Metallurgy—Meetings of Public Companies:—the National Bank, the Ebury Lead Mining Company, the Royal Copper Mines of Cobre, the Lucy Phillips Company, the Vancouver Coal Company—Foreign Mine Reports—Mr. W. H. Cuell's Annual Statistics of the Mining Interest, &c.

* * With last week's Journal a SUPPLEMENT SHEET was given, which contains the Title Page and Index to the Volume for 1867. Also, Mr. Warington Smyth's Lectures, delivered at the Royal School of Mines, Nos. 20, 21, 22—Peat Fuel and its Manufacture—Silver Smelting in Colorado—California Mining Machinery for Nicaragua—Cast-Iron Water-Pipes for Abyssinia.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JANUARY 31, 1868.

COPPER.	£ s. d.	£ s. d.	IRON.	Per ton.
Best selected, p.ton	75	0	6	76 0
Tough cake and tile	73	10	0	74 0
Sheathing & sheets	77	0	78	0
Bolts	83	0	0	—
Bottoms	85	0	0	—
Old (Exchange)	66	0	0	67 0
Burra Burra	82	0	0	83 0
Wire.....per lb.	9	1	0	1 0 1 0
Tubes	0	11 ½	1 0	—
BRASS.	Per lb.	Per lb.	BRASS.	Per lb.
Sheets	per lb.	9d.-10d.	9d.-10d.	—
Wire	"	8½d.-9½d.	"	—
Tubes	"	10½d.-11d.	"	—
Yellow Metal Sheath, p. lb.	7½d.	—	Do.	—
Sheets	"	6½d.	Do.	—
SPELTER.	Per ton.	Per ton.	SPELTER.	Per ton.
Foreign on the spot.	£20	5	0	—
Do. to arrive	20	5	0	—
ZINC.	Per ton.	Per ton.	ZINC.	Per ton.
In sheets	£26	0	0	27 0
TIN.	Per ton.	Per ton.	TIN.	Per ton.
English blocks	96	0	Swed., in kegs(rolled)	14 5 0
Do., bare (in barrels)	97	0	(hammered)	15 5 0-15 10
Do., refined	99	0	Ditto, in faggots	16 0 0
Banca	83	0	English, spring	17 0 23 0
Straits	237	0	Do.	—
TIN-PLATES.*	Per box.	LEAD.	LEAD.	Per ton.
IC Charcoal, 1st qua.	1 6	0	1 8	0
IX Ditto, 1st quality.	1 12	0	1 14	0
IX Ditto, 2d quality.	1 4	0	1 6	0
IX Ditto, 2d quality.	1 10	0	1 12	0
IX Coke	1	1	2	6
IX Ditto	1	7	6	8
Canada plates, p.ton.	13	10	0	—
Ditto, at works	12	10	0	—
At the works, 1s. to 1s. 6d. per box less.			Quicksilver (p. bottle)	6 17 0

* * TIN-PLATES.* Per box.

LEAD.

DO.

STEEL.

Per ton.

English Pig, com....

Do.

LB.

Do.

WB.

Do.

Ditto, sheet

Do.

Ditto, red lead

Do.

Ditto, white

Do.

Ditto, patent shot

Do.

Spanish.....

Do.

18 10 0-18 15 0

0

0

0

0

0

0

FEB. 1, 1868.]

secretary of the company, and a committee of London gentlemen was also appointed to have the general management of the mine. Mr. Francis Pryor was appointed the manager, and Mr. Thomas Pryor the local purser. The majority of the shares was represented at the meeting; and it is satisfactory to find that a good course of copper ore has been discovered by cross-cutting in the 50 fathom level, north of Stevens's shaft, which is worth fully 20/- per fathom. We are also pleased to hear that an engine of sufficient power is to be erected to work the old Wheal Buller. It is well known that this mine was formerly one of the best copper mines in Cornwall, and there are ample grounds for believing that from the large tract of unexplored ground, extending towards Wheal Bassett and South Bassett, that this part of Wheal Buller will yet prove as largely productive as it formerly did.

At Penhills Mine meeting, on Tuesday, the accounts for the three months (after charging for the new steam drawing-engine) showed a loss of £26,45. The report stated that throughout the mine generally considerable improvements had taken place during the past three months, while at Penhills proper important discoveries had been made. The manager thought that in the coming summer the Pink Mine would be unwatered, and prove a valuable addition to the sett.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the "notes issued" of £12,400, represented by a corresponding increase in the coin and bullion on the other side of the account. In the BANKING DEPARTMENT there is shown an increase in the "public deposits" of £93,340, and in the "rest" of £1,958, together £95,340; a decrease in the "other deposits" of £26,230, and in the "seven day and other bills" of £1,440, together £17,670—£17,634. On the other side of the account there is shown a decrease in the "Government securities" of £200,900, and in the "other securities" of £194,628—£95,428, which added to the decrease £17,634. On the liability side, shows a total increase in the reserve of £13,962.

On the Stock Exchange an active enquiry for Mining Shares has prevailed during the week. The following prices were officially recorded in British Mining Shares:—Great Wheal Vor, 20/-, 20/-, 21/-; Great Laxey, 17/-; Wheal Chiverton, 3½; West Chiverton, 67½, 67½; East Carn Brea, 2½; Prince of Wales, 3. In Colonial Mining Shares the prices were:—Yudanamutana, 11-16th, 1½; Port Phillip, 1-16th, 1½; Cape Copper, 8½, 8½, 9. In Foreign Mining Shares the prices were:—St. John del Rey, 34/-, 35, 33, 30, 31, 32; Chontales, 14, 14, 14; Don Pedro, 2 13-16ths, 2½, 2 11-16ths, 24, 24, 24 prem.; Panuco, 1; Alamillos, 9-16ths; Frontino and Bolivia, 1, 1½.

The CAPEL BANHAGLOG LEAD MINING COMPANY with a capital of 15,000/-, in 5000 shares of 3/- each, has issued its prospectus, which will be found in another column. It is stated that one-fifth of the shares is already subscribed for. The purchase money is 549/-, of which 150/- is to be paid in cash and the remainder in shares. The property has been favourably reported upon by Capt. John Kitto. It is situated about 2½ miles from the town of Llanidloes, in Montgomeryshire, and adjoins the Tylwch Station of the Mid-Wales Railway. Its geological position, combined with the numerous advantages surrounding it for facilitating its development can scarcely be surpassed. The sett is very extensive, being from 1 to 1½ mile on the line of the lodes from east to west, and of a corresponding width, and embraces a magnificent mountain range, traversed with lodes of large dimensions. The one on which operations are now being carried on being at least 12 feet wide, and is identical with, and in close proximity to, the lode in the Mid-Wales Mine, on which operations are now being so successfully conducted, and within 100 yards of the mouth of the Mid-Wales Company's deep adit level.

COAL MARKET.—The fresh arrivals this week number 128 ships; this supply, coupled with mild weather, had a depressing effect upon the market for house coals, and business ruled dull throughout, at rather lower prices than last quoted. Hartley coals have been tolerably steady, at previous value. Haswell Wallsend, 17s. 6d. per ton; South Hetton Wallsend, 17s. 6d. per ton; New Belmont Wallsend, 15s. per ton; Hetton Lyon's Wallsend, 15s. per ton; Tunstall Wallsend, 15s. per ton; West Hartley, 15s. 3d. per ton. Unsold, 24 cargoes; 45 ships at sea.

NEW COMPANIES.—Among the undertakings registered during the past week are the Patent Safety Gun-Cotton, the Montgomeryshire Lead and Barites, and the Pattersyke Mining Companies. The usual particulars will be given in next week's Journal.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (Jan. 31) write:—There has been but little business transacted in Liverpool in Chile produce. A parcel of 60 tons of bars of ordinary brands, which has been rather pressing on the market of late, was parted with at 68/- 10s., whilst 150 tons of a favourite brand to arrive fetched out of second hands 69/- 10s. There is nothing now of the latter description to be had, on similar conditions, under 70/- 10s. Of regulars, 300 tons were sold at 14s. per unit. Advices received from Chile report charters for the fortnight ending Dec. 16 as comprising 12,000 tons of fine copper, which is, as was anticipated, considerably under the average. The same mail brings news of a rise both in freight and exchange, to which it is added that some small mines have ceased to work. The news has given the metal something more tone, and it looks as if present values will be maintained. Unmetals imports have fetched 73/- 10s., and are held for 74/- English and fine foreign copper quiet.

SOCIETY OF ENGINEERS.—On Monday evening, Feb. 3, at half-past Seven o'clock, a paper will be read, "On the Survey of Proposed Lines for a Ship Canal between the Atlantic and Pacific Oceans," by Dr. Cullen.

Vice-Chancellor Wood has made an order that the voluntary wind-up of the Prince of Wales Slate Company (Limited) be continued under the supervision of the Court, and has confirmed the appointment of Messrs. F. B. Smart and H. L. Hammack as liquidators.

JOINT-STOCK COMPANIES.—The prospect of a revival in commercial affairs will naturally create a desire amongst the many who have mineral and other properties to offer to the public as investments to possess as intimate an acquaintance as possible with the laws by which public companies are governed; attention may, therefore, be directed to the new edition of the admirable little handbook—"JOINT-STOCK COMPANIES: HOW TO FORM THEM"—by Mr. Thomas Tapping, barrister-at-law, which has just been issued for half-a-crown. The author's object has been to furnish not only an epitome of the law as it stands, but also to express it in popular and intelligible language; in this he has thoroughly succeeded, and as the whole of the information has been arranged in the form best calculated to meet the wants of the non-professional reader, it can scarcely fail to be favourably received. The book is published at the Mining Journal office, and will be forwarded, on receipt of the amount to those requiring it.

PAPERS ON PRACTICAL MINING.—The thoroughly practical character of the papers read at the recent meeting of the Miners' Association of Cornwall and Devonshire will render the detailed report of the meeting particularly acceptable to all engaged in mining operations.

The volume contains papers—"On Bergström's Boring-Machine," now in use at the Persberg Mine, Sweden, and "On the Rock Boring-Machine used at the Altenberg Zinc Mines," by Dr. C. Le Neve Foster; "Remarks on Boring-Machines," by Charles Fox; "On Tunnelling by Machinery," by Gen. Haupp; "On High-Pressure Steam-Bolts," and "On Jordan and Darlington's Hydrostatic Mining Machinery," by T. B. R. Jordan; "On Beaumont and Lockwood's Tunnelling Machine," by Capt. H. Lockwood; "On the Chirton District," by Dr. C. Le Neve Foster; "On an Excursion to the Chirton District," by Francis Oates; on the same subject, by William Argall; "On Vestiges of Ancient Tin Workings in the Looe Pool Valley," by R. J. Cunnack; "On the Occurrence of Tin in the Great Wheal Vor," by G. M. Henry; "On the Calamine Deposits of Sardinia," by F. G. Davis; "On Hydraulic Apparatus as Motors," and "On Transmitting Motion in Mining Operations," by John Darlington; "On the Boring-Machine exhibited, or described at Falmouth," tabulated account thereto, by Dr. C. Le Neve Foster; "On Brunton's Rock Tunnelling-Machine," by J. D. Brunton; and on the Use of Doering's Boring-Machine at Tincrott, by Dr. C. Le Neve Foster.

The price of the book is 1s., and it will be forwarded from the Mining Journal office on receipt of 13 stamps.

* Pressure on our space compels us to omit, until next week, the communication from Mr. P. S. Hamilton, on "Mining Enterprise in Nova Scotia."

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM. STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL. REFINED METALLIC BISMUTH. OXIDE OF COBALT. GERMAN SILVER—IN INGOTS, SHEET, WIRE, &c. NICKEL AND COBALT ORES PURCHASED.

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Address—"J.," care of Messrs. W. H. Smith and Son, Union-street, Birmingham.

TO ENGINEERS.—WANTED, by the DOWLAIS IRON COMPANY, TENDERS for a POWERFUL WINDING ENGINE, for a deep colliery.

Particulars may be had on application to the Dowlaus Iron Company, Merthyr Tydfil.

TO CONTRACTORS, OR MINING AGENTS.—WANTED, TO PURCHASE, about half a mile of SECONDHAND LIGHT RAILS, with or without wagons, for a tramroad.

Anyone having the above for sale, send particulars to Mr. J. S. Toop, Mining Agent, Banty, Cork, Ireland.

LONDON AGENT.—A MECHANICAL ENGINEER, a man of extensive and varied business experience, who holds a very responsible public appointment, WISHES to OCCUPY THE WHOLE OF HIS SPARE TIME in the "public deposits" of £26,230, and in the "rest" of £1,958, together £28,188; a decrease in the "other deposits" of £12,400, and in the "seven day and other bills" of £1,440, together £17,670—£17,634. On the other side of the account there is shown a decrease in the "Government securities" of £200,900, and in the "other securities" of £194,628—£95,428, which added to the decrease £17,634. On the liability side, shows a total increase in the reserve of £13,962.

WANTED, by a PRACTICAL MINER, well acquainted with GOLD, LEAD, and COPPER MINING, and fully capable of UNDER-TAKING THE MANAGEMENT of any property, a SITUATION, either as OVER-MAN or UNDER-AGENT. No objection to go abroad. Aged 32. Address, "W. H.," Brown Horse Inn, Dolgellau, Merionethshire.

WANTED, by the Advertiser, who thoroughly understands the REFINING of NICKEL and COBALT, SITUATION as MANAGER in the ABOVE BUSINESS. Would have no objection to put down a new plant. Address, "E. F.," care of Henry Greenwood, Advertising Agent, Liverpool.

TO ENGINEERS AND COLLIERY PROPRIETORS.

WANTED, a RE-ENGAGEMENT as MINERAL SURVEYOR or DRAUGHTSMAN. Good references and specimens of drawings Apply, "A. Z.," MINING JOURNAL OFFICE, 26, Fleet-street, London, E.C.

WANTED, FOUR ABLE SHAFTMEN, to PROCEED to IRELAND.—Apply, with references or testimonials, stating wages required, to W. G. ROBERTS, Silver Mines, Nenagh, Ireland.

WANTED, FOUR THOUSAND POUNDS, upon SECURITY of an EXCELLENT COLONIAL COLLIERY. Apply, with real name and address, to J. H. HOWARD, Esq., solicitor, Quality-court, Chancery-lane.

WANTED, TO PURCHASE, a LIFT (second hand) of 22 in. or 24 in. PUMPS, complete, from 100 to 300 yards. Address, with all particulars, to E. STOKES ROBERTS, Esq., Public Offices, Chester.

WANTED TO PURCHASE, in good condition, from 48 to 100 HEADS OF STAMPS, with axles and lifters, complete. Also, two or three good WATER WHEELS, from 20 to 30 ft. diameter. State lowest price for cash, to "J. L.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

SLATE QUARRY.—CAPITALISTS can PURCHASE, or become interested in, a most valuable GERMAN SLATE QUARRY, producing now 400 tons of slate monthly. It is intended largely to increase this quantity, and to arrive at 1500 tons. By the aid of low wages and sawing machinery, a ton of slate is manufactured at 1/-, against a selling price of 40s. per ton roofing slates, and 60s. for slabs.

The quarry, situated on a mountain rise, is opened by five floors, 80 yards wide, showing a splendid pure slate rock of the finest quality, blue durable, and easy split.

An inspection of the works will convince an experienced investor that they can rival with the best paying quarries in Wales, and that a high and safe dividend is insured.

Apply, with references, for further particulars, by letter, to "Q. C.," care of Messrs. Wm. Dawson and Sons, 121, Cannon-street, City, E.C.

A VALUABLE AUSTRALIAN COAL PROPERTY FOR SALE, or LEASE. Address, "W.," Post-office, Uppor Baker-street, N.W.

TO BE SOLD, for £150, a 56-in. cylinder PUMPING ENGINE 10 ft. stroke in cylinder, and 9 ft. in shaft, in good order and condition. Can be seen standing.

Apply to WILLOUGHBY BROTHERS, Central Foundry, Plymouth.

FOR SALE, a PORTABLE STEAM ENGINE of 25 horse power. Winding gear to order to suit circumstances. SECOND-HAND PORTABLE STEAM ENGINES, with new MORTAR MILLS, SAW TABLES, &c., on advantageous terms. Apply to Messrs. BARROWS and CARMICHAEL, Engineers, Banbury, Oxford.

THE CAPEL BANHAGLOG, OR EAST MID-WALES LEAD MINING COMPANY (LIMITED).

Capital £15,000, in 5000 shares of £3 each.

Deposit on application 10s., and on allotment 20s.

Shares can be paid in full, and in all such cases fully paid-up share warrants will be issued, which warrants, when once issued, are transferable to bearer without any transfer deed or expense of stamp.

To be registered under the Companies Act of 1867, whereby each person's liability is limited to the amount of shares subscribed for.

BANKERS—THE CITY BANK, Threadneedle-street, London.

SECRETARY—Mr. J. F. NICHOLLS.

TEMPORARY OFFICES,—70, CORNHILL, LONDON.

PROSPECTUS.

This is a company formed (with limited liability under the Joint Stock Companies Act of 1867) for the purpose of purchasing a lead mine, known as the Old Chapel or Capel Banhaglog Mine, and for continuing the works thereof.

It is situated in the county of Montgomeryshire, and forms a part of the rich silver-lead district of North Wales; it is close to the Tylwch Station, on the Mid-Wales Railway.

The mine from its very favourable situation can most cheaply and economically be worked.

The lodes running through this valuable property are a continuation of the rich lodes of the Mid-Wales Mining Company, whose property adjoins this estate, and from the appearance of the lodes, as far as they have been seen, there is every reason to believe that they will prove to be equally productive.

The lode in the adit level at the Mid-Wales Mine is an enormous lode, 12 ft. wide, and producing at the present time 2 tons of lead ore to the fathom, with every indication of further improvement.

It is believed that the property intended to be purchased by this company can be fully developed, and placed in a paying condition, by a moderate expenditure of capital—probably the entire work can be completed for less than £4000.

If no allotment be made the deposit will be promptly returned, without deduction.

No application for less than five shares will be entertained, and the allotments will be made according to priority of application.

Samples of the ores can be seen either at the offices or at the brokers.

Prospectuses and forms of application for shares can be obtained from the secretary.

The following is the report of Capt. JOHN KITTO, late manager of the celebrated Great Laxey Mines:—

Shrewsbury Jan. 9, 1868.—GENTLEMEN: This valuable lead mining property is situated about 2½ miles from the town of Llanidloes, in Montgomeryshire, and adjoins the Tylwch station of the Mid-Wales Railway. Its geological position, combined with the numerous advantages surrounding it for facilitating its development can scarcely be surpassed. The sett is very extensive, being from one to one-and-a-half mile on the line of the lodes from east to west, and of a corresponding width, and embraces a magnificent mountain range traversed with lodes of large dimensions. The one on which operations are now being carried on being at least 12 feet wide, and is identical with, and in close proximity to, the lode in the Mid-Wales Mine, on which operations are now being so successfully conducted, and within 100 yards of the mouth of the Mid-Wales Company's deep adit level.

The property is beautifully situated for adit level explorations; the mountain into which the lodes run being at least 100 fathoms high from its base, and surrounded by valleys containing water in sufficient quantity for dressing and other purposes, which is an essential to successful mining, and cannot be too highly appreciated.

An adit level is now being driven opposite the Mid-Wales Mine, and, as before stated, on the same lode, which is in every respect of the same favourable character, and on being driven into higher ground the result will undoubtedly prove equally satisfactory.

In conclusion, I may state that this property has long been regarded by practical men as a valuable piece of mineral ground, and several previous attempts have been made to obtain a grant of it but without success, and I must congratulate you on being so fortunate in securing such a valuable property, fully believing that it only requires a spirited and judicious development to ensure a lasting and profitable mine.

JOHN KITTO.

To the Directors of the Capel Banhaglog, or East Mid-Wales Lead Mining Company.

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GOLD MINING IN NOVA SCOTIA.—CAPTAIN J. ROBERTS, who has been VISITING THE MINES of NOVA SCOTIA the last two months, has come to the conclusion that, with judicious management, Nova Scotia Gold Mines can be made to pay handsome dividends—by the erection of machinery and good discipline, like he was accustomed to in Gongo Soco and St. John del Rey; but Captain Roberts deeply regrets to find that some of his countrymen who came out here got in such disrepute by their reckless mismanagement of the Nova Scotia Gold and Land Company's property, as to leave very little confidence in their ability as mining men, and which, it is well known, they cannot do without. Capt. Roberts has seen more visible gold in the veins here than in any country he has been into.

Mansion House, Halifax, Dec. 4, 1867.

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ROYAL COPPER MINES OF COBRE.—The half-yearly general meeting of this company having been appointed to be held on Thursday, the report and accounts of the preceding year were submitted. A reference to this (which appears in another column) will show that the railway suit, so important to the company's prospects, has been decided in favour of the Cobre Company, and that the reduction of the tariff from £6½ to £5 per ton has been made, the reduction comprising the whole of the year. By the estimates it appears that for the year ending Dec. 31, 1867, a balance seems to be against the company of 1095l. 11s. 2d., but it should be observed that is assuming the price of the ores unsold to be taken at 13s. 6d. per unit, while those already realised have brought 14s. 2d. per unit, a difference which would balance

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having also sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. F. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuation of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column. In the year 1848, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium published in 1848, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

REVIEW CONTINUED.

NEW EAST RUSSELL sold last year several tons of copper ores, the last parcel averaging 8d. per ton. We have frequently called attention to the merits of this mine as a speculation, and believe if properly carried out it will turn out a great success. The progress, however, has been slower than we expected. Capt. Gifford, the manager of Prince of Wales Mine, writes us, Jan. 25.—"I feel sanguine if the shafts were sunk (say) 12 or 15 fathoms deeper we should have a great quantity of paying ground to take away on the cross, or north, lode. The deep adit, which will come under the large gossan lode seen at surface, 80 fms. deep, is getting clear of the influence of those two large cross-courses gone through, and the ground easy for exploring, with a large, strong, and kindly lode; its character everything that can be expected, without a course of ore. In the 20 west we are cross-cutting south, as it appears from the dialling that the main part of the lode is in that direction. It is true we have been expecting something good here for a long time, which has not been realised, but I feel sanguine that those who hold on will be well paid for their outlay. The large lode of gossan, &c., seen at surface cannot, in my opinion, fail to yield a great abundance of copper ore." This lode, it is remembered, if found richer under the gossan, will give 80 fms. of backs in a hill to be worked away easily and inexpensively. In Prince of Wales Mine, when shares were at 1s. 6d. each, and the mine almost unrecognised, we held on our large interest, and encouraged others to do so, from our confidence in the opinion of Capt. Gifford, whose good opinion of New East Russell, also, has never faltered or varied; and, although so far disappointed, we hope it will not be long before we have to congratulate ourselves and the other shareholders on the expected success.

STANDARD AND PRODUCE.—One in the produce, or percentage of the ore, is considered about equal to three in the standard, or price of the copper in the ore. So that if the standard drops three, and the produce is up two, it is in reality a *rise* in the standard of about 3%.

SATURDAY, JAN. 25.—Good demand for Prince of Wales, West Frances, North Croft, Grenville, Devon Consols, Great Vor, Carn Brea, Chiverton Moor, South Frances, and Marke Valley. West Frances, 30 to 40, and no sellers. Prince of Wales, 58s. to 6s.; Chontales, 4s. to 4½s.; Great Wheal Vor, 21 to 22; West Chiverton, 65s. to 68s.; Wheal Seton, 8s. to 9s.; East Gunnislake and South Bedford, 2s. to 2s.

MONDAY.—Market active for West Frances shares, which have advanced to 45s., buyers. Prince of Wales, 58s. to 6s.; West Prince of Wales, 9s. to 11s.; Chifford, 66s.; Marke Valley, 6s. to 6½s.; North Croft, 2s. to 2½s.; North Treskerly, 29s. to 31s.; East Gunnislake, 2s. to 2½s.; South Frances, 25 to 27; Wheat Bassett, 80 to 82; Wheal Grenville, 3s. to 3½s.; East Bassett, 9 to 10.

TUESDAY.—The market is rather quiet to-day, with the exception of Chontales and Prince of Wales, which are in good demand. Chontales, 4s. to 4½s.; Prince of Wales, 58s. to 6s.; West Frances, 40 to 50; Chiverton Moor, 6 to 6½s.; Great Laxey, 17½ to 18½; Great Vor, 20 to 21; Marke Valley, 6s. to 6½s.; West Marke Valley, 6s. to 6½s.; West Frances, 37s. to 42s.; Chiverton, 4s. to 4½s.; West Bassett, 2s. to 2½s.; Grenville, 3s. to 3½s.; West Chiverton, 6s to 68s.; West Prince of Wales, 9s. to 11s.; Chiverton, 4s. to 4½s.; Carn Brea, 23 to 25; East Caradon, 4s. to 5s.

WEDNESDAY.—The market is not quite so firm as yesterday, and shares chiefly dealt in are Chontales, Seton, Prince of Wales, and Chiverton Moor. Chontales, 4s. to 4½s.; Seton, 87½ to 90; Prince of Wales, 58s. to 6s.; Chiverton Moor, 6 to 6½s.; East Grenville, 2s. to 2½s.; Great Vor, 20 to 21; Great Laxey, 17½ to 18½; Marke Valley, 6s. to 6½s.; West Frances, 37s. to 42s.; Chiverton, 4s. to 4½s.; West Bassett, 2s. to 2½s.; West Caradon, 9 to 10; West Chiverton, 6s to 68s.

THURSDAY.—Market quiet, and dealers occupied with the settlement of the account. Prince of Wales, 58s. to 6s.; Chiverton Moor, 6 to 6½s.; Chontales, 4s. to 4½s.; West Frances, 37s. to 42s.; East Caradon, 4s. to 4½s.; Great Wheal Bassett, 80 to 82; West Chiverton, 6s to 68s.

FRIDAY.—Dealers still occupied with the settlement of the account. Prince of Wales shares being short for delivery, and the appearances of the mine leading to the expectation of cutting the lode in the 65, advanced to 60s. West Frances, 35 to 40; Chontales, 4s. to 4½s.; Great Wheal Vor, 20½ to 21½; West Caradon, 9 to 10; East Grenville, 2s. to 2½s.; West Chiverton, 6s to 68s.

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ANALYSES OF COAL, CANNEL, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by A. NORMAN TATE, F.A.S.L., &c., ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER (Author of "Petroleum and Its Products," &c., MOLD, NORTH WALES.

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Mem. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Present Patent Law."

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Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.

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MINERAL LANDS OF NOVA SCOTIA.

I NTERNATIONAL MINING AGENCY,
OFFICE, SOMERSET HOUSE, PRINCE STREET,
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A. HEATHERINGTON, PROPRIETOR.

A Register kept of every description of Mineral Lands and Mining Shares for Sale.—Properties Viewed and Reported on, and their Purchase or Sale, when required, negotiated for a moderate commission.—The services of Explorers, Overseers, &c., engaged for Mine Owners.—Maps, Diagrams, Statistics, and useful information regarding each district supplied.—Returns made for absent proprietors.

NOTICES TO CORRESPONDENTS.

EARLIER PUBLICATION OF THE MINING JOURNAL.—To meet the wishes of a large number of subscribers, arrangements have been made to publish two hours earlier than heretofore. By this improvement the *Mining Journal* can be delivered in Birmingham, Bradford (Yorkshire), Huddersfield, Leeds, Liverpool, Manchester, Salisbury, Southampton, and Wolverhampton by midday at latest, or from four to six hours earlier than previously. Subscribers in the metropolitan districts should likewise receive the *Journal* by the first morning delivery, and any complaint of their not doing so will be at once attended to.

WEAL EMILY—"Inquirer."—The company to work this sett is, we believe, being formed privately, no prospectus being issued. It is intended, we understand, to work it under the Cost-book System. A letter addressed to the manager on the mine will be the readiest means of obtaining a reply to your other queries.

LECTURES ON COAL.—In December, 1865, you published in the *Mining Journal* extracts from a series of lectures by Dr. Frankland, on Coal, at the Royal School of Mines, London. I should be much obliged if some of your correspondents would inform me, through the columns of the *Journal*, whether the lectures have been published in a separate form, the price, the name of the publisher, &c. If I mistake not, the lectures gave an excellent account of the nature and composition of carbonic acid gas, &c.—P. B. P.

THE COAL TRADE—"F. S." (Stockton-on-Tees).—The quantity of coal raised in 1865 was 101,630,544 tons, of the value of 25,407,635. The quantity used in London in the same year was about 6,000,000 tons, which was brought in about equal quantities by sea and by rail. As to the length of time the supply of coal will last, the estimates are so conflicting that no opinion worth giving could be pronounced.

ROYAL COPPER MINES OF CORBE.—"An Old Shareholder" is informed that the exact loss the company sustained in 1865 was 28,337.6s. 6d., and that for 1867 is estimated at 1095.11s. 2d., on the assumption that the unsold ores do not realise more than 13s. 8½d. per unit. At the sale in Cornwall, on Jan. 23, ores of 5½d. fetched 13s. 8½d. This company's ores are of a much higher percentage, and should command a higher price.

PARIS EXHIBITION—"D. F." (Barnsley).—The reports of the artisans who visited the exhibition under the auspices of the Society of Arts are issued by the Society. The price of the volume is 2s. 6d.

SLATE QUARRYING.—"Chwarelw" says—"The challenge of Mr. Jenkins, which appeared in last week's *Journal*, had nothing to do with the point at issue. The point I attempted to draw attention to was whether the scientific geologist, &c., or the honest, practical, and judicious quarryman, is the best judge of the true cleaving slate-rock, and which I thought would not only have been interesting, but edifying to many of your readers. In my opinion it is the vital point of slate quarries, and failing to distinguish between the true cleaving slate-rock and other slate formation is the shoal upon which many a company has founded and wrecked. *** At the time I left off working I was employed as dresser of slates at one of the best slate bargains in the Welsh Slate Company's Quarry (Palmerston's); and some time ago some specimens of good cleavage, in blades 8 ft. long to 1-32 in., were forwarded, by request, of the Editor, to the *Mining Journal* office, and noticed in the paper."—CHWARELW.—(Some testimonials as to character and ability from the manager of the quarry where "Chwarelw" was employed as a quarryman have been forwarded to us.)

PLUMBAGO—"R. G. S." (South Molton).—The present price of "Ceylon Lump" plumbago from 23s. to 34s. per ton, whilst "dust" fetches from 10s. to 13s. per ton. These prices are exceptionally high: at the corresponding period of last year the price of "lump" was from 8s. to 10s. per ton lower for similar qualities, and "dust" about 3s. per ton lower.

TRIMLEY HALL LEAD MINE.—This company had its office at No. 3, Great St. Helen's. Can anyone inform me what has become of it?—W. D.

C. S. (Bath).—We believe the mine you refer to is in full work, and very favourable anticipations are entertained by the management as to the future of the company. Further particulars shall be given next week.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, FEBRUARY 1, 1868.

PEAT IN THE NETHERLANDS.

Although peat does not at present occupy so prominent a position amongst our national industries as could be desired, the value to which it has been turned in other countries, and especially in Holland, should afford sufficient encouragement to those who are fortunate enough to possess peat properties either in Great Britain or Ireland. The use of this substance for fuel was known, we are told, to the ancient Belgae, whom TACITUS describes with pity as a people compelled to burn their ground for want of wood, and PLINY, with admiration, as a people who fished for fuel, with which, when dried by the wind rather than by the sun, they warmed their bodies benumbed with cold. Thus, the extraction of turf for fuel in Holland dates from the earliest times, though it was not until 1215 that the peasants of Friesland learnt to turn this gift of nature to the best account by chemical preparation. From that period till the present day the consumption of turf in the Netherlands has kept pace with the increase of the population. In 1834 the annual consumption was 22,275,693 tons, and in 1852 this had increased to 33,943,630 tons. These figures are of interest when compared with the consumption of coal in the Netherlands, as showing that peat still holds its own for purposes of fuel, that notwithstanding the great quantities of coal now imported for manufacturing and domestic purposes the demand for peat is constantly increasing, and that this traffic is fifty times as active and extensive to-day as that in coke and coal put together.

The Government has, therefore, been compelled to step in to stay the wholesale destruction of the Netherlands by fire, and the consent of the Waterstaat is now necessary before a proprietor may reduce the level of his land by cutting it up into bricks of fuel for the market. Nine-tenths of the polders now drained and cultivated were once bogs and mosses, such as exist in Ireland and in Scotland, but for the most part situated so low that the layers of turf removed, they rapidly became lakes, which irrigations of the inner waters often converted into inland seas. Then came the prevalent gales, heaping up the outer waters, as they often do in the course of a fortnight, 10 and 12 ft. above the highest spring tides known, the narrow rotten causeways protecting these inland seas would be swept away, and the result is visible to-day in the Zuyder Zee, the Lake of Haarlem, and the thousand other polders whose origin may be traced to early ignorance of water engineering, and the use of turf as fuel from a date antecedent to the Christian era.

It must also be remembered as Mr. THURLOW remarks.—

That besides the immediate profit to be derived from selling paternal acres by the square inch, the landlord might anticipate a more lasting gain from the fact that the removal of the layer of turf frequently exposed rich alluvial lands, which, when dyked and converted into polders, produced crops of potatoes, rye, clover, and buckwheat in rapid rotation; and this hope, though not always realised, has proved a great incentive to the excavation of peat. In general, bogs or turbaries are known in Holland as "hooge" or "lage veen," that is, situated above or below the level of the waters. The former are naturally the most easily worked, as they may be cut out with a spade at discretion; while the latter require preliminary dyking and draining to let off the water before the fuel can be dug and prepared.

Peat has played a part in Holland second to no other produce of that country; and the Dutch relate with pride that it has had its patriotic as well as its material uses. Their history contains two episodes in support of this assertion. The first occurred in 1593, when the Spaniards had with great difficulty constructed a causeway to traverse some bog lands. This passage the Dutch had made impracticable for cavalry and artillery by felling trees and laying them across. Of this timber the Spaniards made a bonfire, which communicated to the causeway and surrounding turbaries, compelling the Spaniards to beat a hasty retreat, and thus raising the siege of some important fortresses. On hearing of this disaster, PHILIP II is reported to have ordered that, "since Holland was combustible, it should be burned to ashes." The second story is that the impregnable town of Breda was occupied by the Spaniards and besieged by the patriots. Winter approached, and one evening a huge canal-boat appeared at one of the water-gates of the city laden with peat. The boat was joyfully admitted by the Spaniards as relieving one of their most pressing wants; the discharge of cargo was postponed till daybreak, but before midnight had tolled the boat-load of turf had proved itself a second Trojan Horse, from whence 80 armed men issued, overcame the guard at one of the gates, and admitted the valiant Prince MAURICE at the head of his army.

These services, besides its property of giving out heat and light, its ashes affording rich manure, its root being valuable for cleaning pots and pans, and its smoke for preserving fish and meat, have endeared it to the heart of every peasant as an article of primary importance to the domestic comfort of his daily life.

The three northern provinces of Friesland, Drenthe, and Groningen, undoubtedly owe most of their well-being to their wealth in peat. There the proprietor of the soil, after exhausting one layer of turf, and reaping splendid crops without manure from the alluvial soil laid bare, often after awhile removes the alluvial soil to some neighbouring sandy waste, discovering under it fresh layers of peat, and still more alluvial soil.

The depth to which cultivation is thus carried by successive removals of peat and soil often exceeds 20 ft.; and no truthful estimate can be formed of the original face of nature by the study of the present features of a Netherlands landscape. In these three provinces, but especially in Overijssel, one last phenomenon occurs which calls for some remark. This is the existence, now rare however, on the borders of large lakes, of floating turbaries bits of which may be cut off in strips, according to the width of the canals they have to traverse, and floated down to market. Many legends are told of the embarrassments these floating turbaries have caused. Many a farmer has been

compelled to tether his fields to prevent their floating away; and when unable to keep flocks and herds separate, these fields have been pushed off shore, and anchored at a distance. Then perhaps a storm has suddenly arisen, the fields have dragged their anchors, and floated out to sea. Such incidents are of rare occurrence, but it would not be difficult to make a collection of authenticated tales of a similar description that would strike astonishment into the sober minds of English husbandmen, as tending to convert the laborious practical profession of a farmer into a life of fable and excitement.

COMMERCIAL CREDIT AND MORALITY.

The Liverpool Chamber of Commerce, in obedience to a requisition held a special meeting on Wednesday, to consider the subject of Bankruptcy Laws, and the laws bearing upon commercial credit and morality, with a view to determine whether it was expedient for the Chamber to take steps towards procuring their amendment. What has happened during the last few years in commercial circles in this country, and in Liverpool in particular, has made it fitting that questions should be discussed in earnest. And it was becoming this should be done prominently in the Mersey seaport. Mr. Gösch, the writer of "Two Per Cent." in the current *Edinburgh Review*,

have form, the segment of the circle that represents their concavity being four English inches, and half-an-inch at its greatest depth. Any carriage having the breadth of track of the rails can run in their grooves, or pass in or out or across them without difficulty. The breadth of these grooves is too small to allow the feet of the horses to be entangled, or catch in them, and their depth is so slight that the wheels can easily turn out. The rails are strengthened beneath by a flange, which holds them in place, and gives them firmness. They are kept constantly free from obstruction by a broom (or plough) fixed to the carriages in front of the wheels. Their cost is less than that of ordinary rails (as they may be made lighter, and their position is beneath the surface, and not subject to siderogravies). Cast-iron may sometimes be substituted. The carriages of Mr. EASTMAN's system have wheels with a convex edge, of a smaller radius than that of the concavity of the rails. The friction surface is thus very small, and the friction much reduced. The axles are united by connecting rods, that act upon each other as to place themselves always exactly in the curves (or the axes on the radiating lines from the centre of the circle) that is described by the wheels. The hind wheels thus follow exactly the tracks of the front wheels, and the carriages will turn with facility and safety in curves of a very small radius. The carriages may also run on any other road as well as ordinary carriages. They have their bodies very near the ground, so that persons may get in and out without difficulty. The carriages are also spacious, light, and comfortable.

The striking contrast between the proposition made by Mr. EASTMAN, to which reference is made above, and those of all other persons who have sought to give the inhabitants of large towns the advantage of street tramways, is that Mr. EASTMAN proposes only to furnish an iron rail or road for the public use, which may be utilised by common carriages, and thus prevent the monopoly or exclusiveness of a street railway, by individuals or a corporation, allowing no privilege in the mechanical construction which cannot be used in common. Mr. EASTMAN asks no concession for himself or for his friends, and is entirely unconnected with any company or combination. These are circumstances which cannot be too carefully kept in view, for it must be admitted that the old street railway system is to a certain extent a nuisance, and there are many who consider that the tramway companies, whose Bills will shortly be before Parliament, will, in the event of success, be entitled to credit rather for the zeal with which they have worked to conquer prejudice than for the ingenuity displayed in the mechanical arrangements they propose to introduce. Taking all these facts into consideration, it becomes a matter for serious question whether it would not be better to give the Metropolitan Board of Works power to insist upon the laying of tramways, which shall be available to all who think fit to use them, than to grant monopolies to separate companies, in such a manner as practically to confine the use of the rails to one particular kind of wheel, which it could not be hoped would come into general use for ordinary traffic.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

The "cry is still they come." Patents relating to steel still crowd the list of specifications. The importance of the subject is continuously manifested by this practical evidence of industrial consideration.

The recent list of specifications comprises a patent of Mr. H. K. YORK, of Grange Town Ironworks, Cardiff, for improvements in the manufacture of steel. According to his specification, his invention has for its object the manufacture of steel from cast-iron, by fusing a mixture composed of iron, purified and decarbonised, and a certain proportion of cast-iron containing carbon, or carbon and manganese, which is commonly known as spiegeleisen.

The recent specifications include one of Mr. JOHN H. JOHNSON, of Lincoln's Inn-fields, for improvements in rolling and shaping metals, and in the machinery or apparatus employed therein. This is a communication to him from U. Petin and J. M. Gaudet, of the celebrated firm of Petin, Gaudet, and Company, ironmasters, of Rive de Gier, in France. This invention relates to a peculiar combination and arrangement of rolling-mill for rolling cross-shaped and other forms of pillars, girders, or bars. In this invention four rolls are employed, of any desired form, according to the shape of the article to be produced. The top and bottom rolls are driven in the usual or other convenient manner, whilst the other pair of rolls revolve horizontally, and they are disposed on each side of the central vertical plane, which passes transversely through the top and bottom rolls, and are rotated solely by frictional contact with the metal to be rolled. After each passage of the metal the top roll and two horizontal rolls are moved inwards slightly, by means of powerful adjusting screws or other mechanical contrivances, so as to nip the metal equally on all four opposite sides.

Gold rarely forms the subject of Letters Patent, although it is (and naturally so) very frequently their object. However, Mr. F. B. MILLER, an assayer of New South Wales, has recently specified a patent which relates to this surerous subject. The title is an improved method of toughening British gold bullion, or refining alloyed gold, and separating therefrom any silver it may contain. In his specification the patented proposes to effect his desirable object by the employment of chlorine gas or hydrochloric acid gas, applied in such manner that it shall rise up amongst and through the alloyed gold in a molten condition, by which means the chlorides of silver and the chlorides of any other metals of base order which may be present, will be formed and will rise to the surface of the melted mass, while the gold will remain beneath in a purified and tough condition.

COAL IN ITALY.—In spite of the assertions to the contrary of many geologists, it is now fully proved that Italy possesses many deposits of coal and lignite, some of which are at present explored with most satisfactory results. Among these may be mentioned the mines of Borgotaro, situated in the valley of the River Taro, in Parma. The quality of coal obtained from these mines is excellent. From experiments that have lately been made at the Milan Gasworks with Borgotaro coal, 24 cubic metres of gas per quintal of coal were obtained (847.60 cubic feet per 1 cwt. 3 qrs. 24 lbs.). But the gas produced was of little illuminating power, and the coal gave little or no coke or tar. A second experiment with coal from the same pit, but obtained at a greater depth, gave most satisfactory results. With this coal, which resembles Cannel, a gas with an illuminating power of 25 per cent. superior to that at present used at Milan was obtained, and producing 52 per cent. of good saleable coke. The quantity of gas produced per quintal of coal was 24 cubic metres. From the geological aspect of the Apennines, and the analysis made of its coal, it may be justly supposed that the deposits of mineral fuel are most extensively and deep. The construction of the proposed railway from Parma to Chiavari, in the valley of the Taro, will contribute greatly to the development of coal mining in the Apennines, and will tend to diminish, to a great extent, the immense tribute which the Italians pay to foreign countries for fuel only.

COAL IN AMERICA.—The total production of anthracite coal in the United States during 1867 is estimated at 12,790,000 tons, an increase of 250 tons over the yield of 1866: 214,000 tons of coal, mainly Cannel, were imported from Great Britain during 1867.

MINERAL TRAFFIC ON RAILWAYS.—In 1862 the railways of the United Kingdom carried 63,405,864 tons of coal, coke, and minerals; in 1863, 68,043,154 tons; in 1864, 75,445,781 tons; in 1865, 77,805,786 tons; and in 1866, 85,483,444 tons, showing an increase in five years of no less than 22,077,580 tons. The revenue derived by British Railways from mineral traffic stood in 1862 at 4,957,406.; in 1863, at 5,419,667.; in 1864, at 6,302,882.; in 1865, at 6,469,502.; and in 1866, at 7,074,923. The mineral traffic of the 14 leading railways of England, Wales, and Scotland was as follows in 1866:—Caledonian, 5,691,129 tons; Glasgow and South-Western, 2,755,305 tons; Great Eastern, 1,010,173 tons; Great Northern, 2,391,007 tons; Great Western, 6,012,211 tons; Lancashire and Yorkshire, 4,531,620 tons; London and North-Western, 11,331,103 tons; London and South-Western, 493,805 tons; London, Brighton, and South Coast, 629,627 tons; Manchester, Sheffield, and Lincolnshire, 2,460,866 tons; Midland, 5,983,873 tons; North-Eastern, 15,813,619 tons; North British, 4,118,943 tons; and South-Eastern, 236,992 tons. The system which enjoys the finest mineral traffic is thus the North-Eastern, which comprises the old Stockton and Darlington, West Hartlepool, and Newcastle and Carlisle Railways.

TRINIDAD BITUMEN, AND CHEAP GAS.—Although numerous attempts have from time to time been made to turn to commercial advantage the immense deposits of bitumen or mineral pitch which the Island of Trinidad possesses, comparatively little has yet been done without success being made dependent upon the results of untried processes. Many of these were, doubtless, capable of being perfected by the expenditure of the necessary time and capital, and would ultimately have returned ample to compensate for the outlay; want of patience, however, on the part of the capitalists has caused one position after another to be abandoned; and many have, in consequence, been inclined to pronounce all suggestions for the utilisation, upon a large scale, of the Trinidad bitumen hopeless. But it now seems that so far from special processes being necessary in order to give this substance a commercial value, it is capable of application in the production of an article which is indispensable to the supply of our daily wants—cheap gas. Mr. ARTHUR A. COCHRANE, of Westminster, has succeeded in obtaining excellent results, by employing it as a substitute for Boghead Cannel; he has obtained a gas of equal illuminating power and in quantities which will make its use far more economic than that of the mineral it is proposed to replace. Before applying to the War Office Mr. COCHRANE made a long series of trials with the Trinidad bitumen, mixed with coal, in the gas retorts, for the purpose of increasing the illuminating power of coal

gas, for which purpose Boghead mineral is usually employed. The results were so satisfactory that the War Office ordered 200 tons of bitumen for the use of the gasworks. The common bitumen from the lake, when mixed at the rate of 15 per cent. of bitumen with 85 per cent. of Whitworth coals, gave about 12 per cent. less in quantity than Boghead and coal mixed in the same proportions, but was of equal illuminating power—16-candle gas. The price of bitumen is estimated to be, delivered in the Thames, from 30 to 40 per cent. lower than that of the Boghead Cannel. It is said that to obtain 19 and 20-candle gas requires 25 per cent. of bitumen, mixed with 75 per cent. of Whitworth coal, which of itself gives 13½-candle gas. Boghead and coal, when mixed in the same proportions as above stated, give a result of 12 per cent. in favour of the Boghead mixture, and an additional illuminating power of 2½ candles. Other qualities of bitumen afford even better results than the common lake bitumen. It is well known that Boghead mineral gives the largest results, both for quantity and quality of gas, and, therefore, there was an advantage in comparing the bitumen with the highest standard. The application now proposed has been patented by Messrs. COCHRANE and UPWARD, the admixture being the novelty claimed. The late Earl of DUNDONALD carried out a series of trials to utilise the bitumen *per se* to make gas, but the admixture of bitumen with coal offers much greater advantages.

REPORT FROM SCOTLAND.

JAN. 29.—The Pig Iron market has advanced about 6d. a ton since last report, with a firm market, but not much business doing. Warrants are scarce, on account of a number of contracts having been called up, and speculators are reaping any profit that is going. Masters' iron is decidedly dull, and the tendency—so far as manifested—is to lower prices for pigs. This is keeping Middlesborough iron out of the market for the time, and will help the demand here. The shipments are not, however, very cheering, being under the corresponding week of last year in the proportion of, for the week ended yesterday this year, 5740 tons; last year, 6040 tons. Of the Monkland and Chapelhall furnaces seven were blown out last week, but have since been re-lighted, and two additional furnaces have been blown in at Glengarnock, in Ayrshire, but iron cannot be profitably made at some of the works at present prices. To-day a large business was done at 52s. 6d. down to 52s. 3d. cash and a month fixed, and one transaction at 52s. 8d. and a month open, closing nominally at the lowest: g.m.b. No. 1, 52s. 9d.; No. 3, 51s. 9d.; Gartsherrie and Coltness, 57s. 6d.; Glengarnock, 56s. Manufactured iron is not improving in demand, so far as merchant bar is concerned, and although second-class makers quote generally from 6s. 15s. to 6s. 17s. 6d., orders are being taken at a reduction of 2s. 6d. from these prices to secure trade. This will lead to a reduction in the wages of millmen and puddlers, but the trade here are waiting for the movement of one large firm in that direction, when they will all immediately follow. Shipbuilding iron keeps in improved demand, and the prospects for makers of this description of iron are very good. Angle iron is presently quoted at 7s. 2s. 6d. to 8s. 10s.; plates, 8s. to 10s. All the first-class brands of bars are now quoted at 7s. The ironmoulders connected with the Union having refused to work with non-Union men, the Masters' Association met, and have unanimously resolved:—"That notice be given to Union moulders that on and after Feb. 1 their services will be dispensed with, until the directors have it in their power to intimate that all shops in the trade that are still struck or shut by the moulders' Union have been opened, free of all restrictions." They further resolved, that if necessary they will order a general lock-out till these terms are complied with; there are fears that this will be the upshot of the resolution. Coals meet with an average demand for shipment, but the home enquiry is still limited, and prices are weak. To lead to business, the usual discounts have, in some instances, been doubled, and in others much augmented, but with no better effect than that of accumulating stocks away from pits, as there is not a consumptive demand for the article. In some districts the men are restricting their output, so as to lessen the supply, but this is making no perceptible change in the absence of demand. From the Scotch ports 17,260 tons were sent by sea, against 16,775 tons in the corresponding week last year; but we regret to learn that not a few of those cargoes are going into stock in the ports to which they have been consigned. The colliers are at a loss what to do with the proposed reductions—how are matters to be made better? Can a strike effect any beneficial change?

REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 30.—The Iron Trade of this district, although in no way improved since last report, cannot be said to be in a worse position than it has been for some weeks past. As the quarter progressed, makers anticipated that the unsatisfactory position of the trade would be greatly modified, but such has not been realised, as dulness and want of animation prevails throughout the whole district. At several of the works the men in some branches are not employed more than half-time, while in others there is a little more activity evinced than at the commencement of the quarter. The unfavourable reports received from the other iron-producing districts are not without their effect on the iron trade of this district, irrespective of the increased competition they cause for the orders offered. At some of the establishments attention is being paid to the manufacture of tyres, chains, and other miscellaneous descriptions, and it is not improbable that ultimately the district will not depend so much on the rail trade as it has hitherto done. The reduction in wages having been carried out, a saving will be effected in the cost of producing iron, and manufacturers will now be enabled to compete for many contracts they have hitherto been prevented from doing, unless they felt disposed to undertake the execution of orders they well knew would entail a positive loss. Although no improvement has taken place, makers generally believe that the worst time has been seen, and there is evidently a more cheerful tone prevailing than for some time past. Public confidence in railway securities is being gradually restored, and this will undoubtedly place the home railway securities in a position to make the purchase of rails and other materials they so much require. There are a few shipments to be made to the United States, and should no political contentions arise in that country to interfere with commercial enterprise, some large orders will, no doubt, be speedily sent to the makers in this district, as there are some hundreds of railway mileage requiring re-laying, and which will be done in the ensuing spring. Enquiries from the Continent are not numerous, but there is an expectation of an increase, as there is no probability of a war taking place. The contemplated extensive railways in Russia, Prussia, and Hungary inspire hopes in makers' minds, as there will be a large demand for iron if the schemes are carried out. For Pig-Iron the demand has slightly increased, and future prospects are considered encouraging. Tin-Plates are in better request, and it is believed that prices have touched their lowest. The Steam Coal Trade is not quite so brisk as it has been, but this is mainly owing to the unfavourable weather which has prevailed, and retarded shipping operations, and not to any material falling off in the demand. Proprietors generally are tolerably well off for orders, but prices are low, and there is no prospect of an immediate improvement. The House Coal Trade is dull, and the purchases of West of England and Irish houses are below the average.

The Ebbw Vale Company (Limited) have notified that they have made arrangements whereby the call of 27. 10s. per share, which was contemplated in February next, will not be required. They also state that, although the iron trade is worse than at any time for 25 years, the company have earned a small profit for the six months ended in September last, while the December quarter shows a similar result, but that, owing to the continued depression in the trade, it is considered advisable to defer declaring a dividend for the present. The directors are taking counsels' opinion as to the best course to be pursued to carry out the proposed reduction of the nominal amount of the capital. The wages question cannot be said to be yet settled in this district, although there is no fear from the disposition shown by the men of a strike taking place. During the past week meetings of colliers, miners, and ironworkers have been held at Merthyr, Dowlais, Aberdare, Rhondda Valley, and other places, and at all these gatherings it was admitted that the extreme depression which prevailed in the iron and coal trades, more especially the former, fully justified the employers in making some reduction, but 15 per cent. was considered an unusually heavy drop. It was urged that masters ought to be satisfied with reducing the wages scale 10 per cent., for that would enable them to very materially reduce the cost of producing either coal or iron. At two or three of the meetings an opinion was expressed that the hands should not submit to a drop of more than 7½ per cent. Deputations have been appointed at

the principal works to confer with the masters, and it is not improbable that the latter may, perhaps, average prices, so that the reduction may range from 12 to 13 per cent.

A month's notice has been given to all the hands employed at the Beaupre and Nant-y-Glo Works, which belong to Messrs. J. and C. Bailey. The proceeding has caused much surprise, and it is feared that the establishments are to be altogether stopped.

The Hendy Tin-Plate Works, near Lloughor, although not quite completed, have during the past ten days been in active operation, and a large number of men are employed. The works, which were projected by owners of spelter works in Birmingham and Gloucester, are fitted up in the most modern style, and the most improved machinery has been constructed, by local engineers. New spelter works have been just constructed in Llandore and other places, near Swansea, which proves that these branches of trade are by no means so depressed as many others.

Messrs. Jones, Lewis, and Williams, proprietors of the Coedcae Colliery, Rhondda Valley, gave a dinner on Saturday to the whole of their employees. In previous reports reference has been made to the misunderstanding which existed between the colliers and the contractor, and the disgraceful scenes which ensued, the result being the committal of several of the colliers for trial at the ensuing Assizes for riot and attempted murder. Upwards of 200 men and boys sat down to dinner, which was intended as a reconciliation between the two parties, the proceedings passing off in a very amicable and decorous manner. During the evening a great many toasts were drunk, and some neat speeches were made, in which the masters and men expressed their deep regret for all that had occurred in the district, and determined to entertain sincere friendship for each other in future.

Mr. Leybourne, for many years superintendent of the locomotive department of the Monmouthshire Railway and Canal Company, has been appointed manager at the Rhymney Ironworks. Mr. Leybourne has succeeded in winning the good opinion of the employees engaged at the railway works, and his departure is much regretted by all under his command.

REPORT FROM THE FOREST OF DEAN.

JAN. 29.—The sale of the Bowson Colliery came off on the 23d inst. There were present about 30 gentlemen, amongst whom we observed Mr. O'Barrett, Messrs. Goold and Hayworth, Mr. Thos. Bennett Brain, Mr. Thomas Foster Brown, the Deputy Gaveller, and the Crown Receiver, who were there to watch the proceedings on behalf of the Government. Mr. Bruton, the auctioneer, introduced the property to the notice of the company by a lucid statement of the circumstances under which the colliery was offered for sale. Mr. M. F. Carter, solicitor, read a notice setting forth certain claims which the Bilson Coal Company conceive they are entitled to, in consequence of the inflow of water into their works from the Bowson Colliery. Mr. J. Lovegrove, acting on behalf of the latter company, deprecated the course taken by the Bilson Company, in giving notice without previously furnishing a copy of it to his clients, when he made some very uncalled for observations, reflecting on the conduct of Mr. Carter, who explained that he was not instructed to give notice, but to read it; he was quite willing, however, to furnish him with a copy, and would have done so, but was informed no solicitor would be present representing the Bowson Company. At this point Mr. A. Goold intimated that he had a copy, which Mr. Carter handed to the auctioneer. After various observations from a shareholder, who attempted to show that the notice was given with an intention to damage the property, the auctioneer proceeded with the description of the colliery offered for sale, and asked if any gentleman present would favour him with a bidding, which enquiry was often repeated, but there was no response; and, as no offer was made, the auctioneer announced that it would be open for sale by private treaty.

The men at Messrs. Russel's forge have now fairly settled to work on the reduced scale of wages, and we are happy to state that apprehension is entertained of a reduction taking place at any of the other works in the district. All the blast-furnaces are in full operation, and there are an average number of orders on hand. The blast-furnaces at Soudley, the property of Messrs. Goold Brothers, are not progressing well, in consequence of not having a sufficient and constant supply of minerals and other materials for the furnace. There are a few very valuable iron mines near at hand, and it is a great pity the firm do not avail themselves of the opportunity of purchasing and developing such a mine, from whence they could obtain a supply of ore for smelting operations.

Some few days ago a serious accident occurred at the Findall Iron Mine Works, the property of the Dean Forest Iron Company. It appears that while one of the men—Thomas Cooper—was in the act of ramming down the powder which had been placed in a hole already bored, it became ignited, but fortunately the piece of rock did not come away, otherwise two or three lives must have been lost. Every attention was paid to poor Cooper, and we are pleased to say he is in a fair way to recover. His sight was supposed to be lost at the time of the accident, but it is gratifying to know that this is not the case.

A fatal accident occurred at the Bowson Colliery, by which a poor man lost his life, on the 15th inst. The evidence adduced disclosed that Edward Hooper, the deceased, went down the shaft about 10 o'clock at night, and had returned two or three times in safety, but on coming up at 12.45 o'clock the engineer pulled him right over the wheel, dashing him against the framework, by which his skull was broken. In addition to this, he was hurled a distance of many yards into an ash-pit, where, of course, he was found quite dead. The workmen lost no time in taking him home, which duty they performed with agitated minds and sorrowful hearts. An inquest was held at the Globe Inn, Cinderford, before Mr. J. Lovegrove, the coroner; and a respectable jury, who investigated the case, returned a verdict of "Manslaughter" against William Jordan, the engineer, who was upon the coroner's warrant, committed. The witnesses examined were W. Burdett, the manager, Thomas Jordan, banksman, James Baldwin, who worked with the deceased in the pit, and G. Cooper, who gave evidence as to the working of signals, &c. The prisoner was on Monday last taken before the Rev. C. E. Dighton and Sir T. Crawley Boevey, the sitting magistrates, at Mitcheldean, and finally committed to take his trial at the next Gloucester Assizes on the charge of manslaughter, but admitted to bail in 100*l.*, and C. Brain Drybrook in 50*l.*

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 30.—The dispute in South Derbyshire, which has lasted upwards of eleven months, is now all but closed, and the men who endeavoured to enforce the Union and its rules at all the collieries, owing to the determination of the masters, have been signally defeated. To the masters the loss has, no doubt, been serious, but it has been far more serious with the workmen and their families, who have suffered great privations. During the past week this district, including Gresley, Swadlincote, and Newhall, has been in a state of fermentation, in consequence of several outrages having taken place. Owing to the introduction of a large number of men from Staffordshire and other places, as well as from the return of some of the old hands, the pits have got nearly full handed, and the hands out, seeing that they were defeated, commenced the work of outrage and intimidation. Several of the men have been assaulted, and bricks thrown through the windows of the houses occupied by them. The road from the station and those leading to the collieries are watched by pickets, and every person at all in working garb is narrowly watched. So serious have some of the acts of the men been that the proprietors have offered a reward of twenty guineas in one instance for such information as would lead to the apprehension of some men who seriously assaulted Thomas Lea, a collier working at Church Gresley. The men out are still in receipt of pay, principally from the South Yorkshire Miners' Association, but it is evident that the closing scene is at hand, and that no inconsiderable number of the men who were once comfortable, and well and profitably employed, will have to go into other districts

tition with other districts. There is no change with regard to coke, most of the furnaces in the district and on the Trent being in blast.

DERBYSHIRE COAL AND IRON TRADES.

DEVELOPMENT OF MINERAL WEALTH BY THE MIDLAND RAILWAY.

The various extensions now in course of construction by the Midland Company for the purpose of completing their system appear not to have that importance attached to them as really profitable investments which they deserve. Attention, so far, has been mainly directed to the probable actual cost over the first estimates, whilst the returns which may be expected on the very large capital laid out has, to a considerable extent, been overlooked. Such being the case, a notice of some of the principal branches now fast verging towards completion may be the means of giving some idea of their value, so soon as they are brought into work. Amongst the most important may be named the direct line from Sheffield to Chesterfield, and which gives every promise of being one of the most important branches, in a pecuniary point of view, of which the Midland can boast. For a short line, of some 14 or 15 miles in length, it is questionable whether there is anything showing a better prospect of paying a very large dividend on the amount of capital which there has been expended upon it. On its route ironworks and collieries are in course of formation and sinking, in addition to those already in working operation, and which have so long been awaiting an outlet for their produce. At Dromfield, midway between the two towns, not only will the minerals be developed, but large additional works are to be erected by the Messrs. Lucas, the oldest firm connected with the iron trade in the district. So far back as 1794, S. and A. Lucas took out a patent for making small castings, comprising useful and fancy articles of various descriptions, by melting ordinary pig in crucibles until it became as fluid as water, and then running it into delicately-formed moulds. The system has since then become general. Close to the works alluded to is the Unstone Valley, rich in ironstone and coal, which are now in course of development, the West Staveley Company being at present engaged in sinking to the black shale, whilst some very extensive ironworks are projected. From this point to Whittington and Sheepbridge there promises to be one unbroken line of works of various kinds, all of which will, there is no doubt, be dependent on the line for the disposal of their produce with the railway facilities which will be thus afforded, and with the works already in operation and about to be opened out, and a country teeming with mineral wealth, of the advantages of which capitalists are now fully aware, the line cannot fail of being a great success. The branch line from Cudworth to Barnsley, which will shortly be opened to within a mile or less of the last-named town, will also run through a fine mineral district, and already one of the largest collieries in Yorkshire is being opened out on its route by Messrs. Day and Co., this branch cannot fail being remunerative, seeing that in addition to its mineral traffic it has the convenience of mails to and from London and other places to Barnsley and the North.

The extension of the line to London, however, cannot fail, with the main arteries and branches in full working order, to add immensely to the revenue of the company in minerals alone. To those at all acquainted with the Derbyshire coal field this will be apparent, and easy of proof by reference to the returns of the quantity of coal carried into London by railway for the year 1867. The district through which the Midland alone passes supplies fully two-fifths of all the coal carried into London by railway, which last year was 3,295,622 tons. Of that quantity the London and North-Western carried 1,243,330 tons; Great Northern, 1,644,125 tons; Great Western, 425,715 tons; Great Eastern, 355,432 tons; and the Midland, 157,246 tons only. From Clay Cross, on the main line, were sent more than one-tenth of the entire quantity carried by railway, yet the Midland only carried 125 tons, whilst the London and North-Western carried 187,512 tons, the Great Northern 72,758 tons, and the Great Eastern 47,889 tons. Now, with sufficient rolling stock, and a straight run into London, there is no reason why the Midland should not carry out at least 1,250,000 tons of coal annually from Derbyshire to the metropolis, instead of 157,000 tons. The gross amount for the carriage of such a quantity could not be less than 500,000/- at the present rates. In addition to the foregoing figures, it may be stated that the collieries now being opened out on the line lead to an increased tonnage at the rate of at least 750,000 tons per annum, all of which will have to be transported by railway. With these facts in view, the great power the Midland has within itself may be gathered, and the vast revenue it is capable of obtaining from its mineral traffic, for the development of which every facility should be afforded. They will also show the high position the Midland is ultimately destined to attain, and the bright future that is in prospect for the shareholders, as the line will, doubtless, become one of the best and safest for investing in, notwithstanding the ordeal it has recently gone through.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 30.—There is no change to notice in the Iron Trade of this county. Orders are scarce, numbers are out of work, and much larger numbers are pinched with the poverty that comes of only partial wages. North Staffordshire is in hardly so bad a state as South, but both are in a condition of great depression. The failure of Mrs. Gibbons, of the Millfields Furnaces, was announced last Friday. Pressure by the liquidators of the Birmingham Bank was the immediate cause. Mr. Benjamin Gibbons died about three years ago. The liabilities are, it is said, about 40,000/- The assets are considerable. Messrs. George Barlow and Co., of Mont-row, Smithfield, Birmingham, iron, steel, and tin-plate merchants, have stopped payment. The liabilities are 6740/-, and the deficiency 3669/- An offer to pay 7s. 6d. in 12 months was conditionally accepted by the creditors. Mr. Finsley, a very large nail factor, has given notice to reduce prices 20 per cent, alleging the state of the trade as the reason. This trade has long been specially poor, and the earnings very small; and this last blow seems to strike despair into all hearts. Several other firms have given notice of a reduction of 10 per cent. The *Birmingham Gazette* states that Messrs. H. and R. J. Moser, of London, are working a patent by a Mr. Huggett for making horse-shoe nails by machinery. The nails are made of best Swedish iron. The attempts to make horse-shoe nails by machinery have been very numerous. The late Mr. Joseph Hall, who did so much to improve the manufacture of iron, made some efforts to roll these nails, and the writer has seen some he so produced; but he was never able to carry out the invention to perfection, from his attention being otherwise directed.

Two chartermasters, Jabez Broad and James Clayton, were charged by Mr. Meir, proprietor of the Tunstall Colliery, with neglecting to carry out their contract to get the Little Bow coal. The defendants called Mr. Wynne, the Government Inspector of Mines, who gave it as his decided opinion that from the way in which the pit was laid out it was dangerous, on account of the want of ventilation, to go to the end of the working. He also said the timber supplied was very bad. The stipendiary magistrates dismissed the case, on the ground that the bench could not direct the men to go to work where Mr. Wynne had said their lives were in danger.

Amidst the general wreck of joint-stock enterprise it is gratifying to find that some have been, and continue, successful. The Rolling-Stock Company, which is located at Wolverhampton, goes on as prosperously as ever. At the half-yearly meeting, on Tuesday, the usual dividend at the rate of 11 per cent. was declared.

REPORT FROM NORTHUMBERLAND AND DURHAM.

JAN. 30.—The Iron Trade—that is, manufactured iron—continues to be characterised by dulness, and reduction in the price of labour is still the order of the day. A reduction has been made in wages at Hawk's Works, Gateshead. Some little stop was made by the men, on account of the proposed reduction, which amounted to 1s. per ton on one class of work, and 9d. per ton on another, but an amicable arrangement was arrived at, by making the reduction of 6d. per ton in one case, and 4d. per ton in the other. The rollers and others struck work at Abbot's during last week, in consequence of a proposed reduction in the prices there also, and those mills are, up to this time, idle in consequence. The men have offered to go in on similar terms to those at Hawk's, but as yet the masters have not complied, and so the master stands.

The usual weekly meeting of the Iron Trade was held on Tuesday, at Middlesbrough. There was a large attendance of gentlemen connected with the trade from Newcastle, Darlington, and other places. The proposed reduction of the wages of blast furnacemen was freely canvassed, and it was stated by Mr. H. Bell, of the firm of Bell Brothers, of Port Clarence, that they had agreed with their men. They had given the men notice of a reduction of 10 per cent., and on their refusal to accept this the furnaces were damped down, and on the men seeing this they accepted the terms offered. Next Saturday the notices of a similar reduction expire at Boleckow, Vaughan, and Co., and at Messrs. Cochranes' Works. It appears that a more cheerful tone was shown in the Pig-Iron Market, and the prices were—No. 1, 46s. 6d.; No. 3, 43s. 6d.; No. 4, 42s. 6d., f.o.b. The stock now in store is 70,645 tons. Since the 21st 1413 tons have been received for warrants; stocks are increasing. Some enquiry was made about Mr. Jones's process of making steel of Cleveland iron, and one of the firm of Fox, Head, and Co. stated that they expected soon to be ready to make large ingots of cast-steel, after which rails would be made and tested.

The water has been got out of the Shank House Pit, so far as to enable the men to reach the seam, and the drainage of the latter is now going on rapidly, so that the drawing of coals may be expected to be resumed there shortly.

A strike has been going on for some time at the extensive chemical works of Messrs. Althausen, the cause being a proposed reduction in the rate of wages. A number of men have been brought from London and other

places, and by this means Messrs. Althausen have endeavoured to keep the work going, but the usual means (bribery and intimidation) have been freely resorted to by the Union men, and the strangers have in many cases been persuaded by the Union men to leave the works, and money has been given them to enable them to get away from the district. Several of the men were, however, brought up at the Gateshead Court on Tuesday, and convicted in each case, but on engaging to return to their work they were not sent to prison.

STRIKES, AND HOW TO PREVENT THEM.—On Monday and Tuesday evening the addresses of the competitors for the prizes offered for the best speeches on this subject were given in the Town Hall, Newcastle. The first prize was awarded to Mr. Beckwith, of Ouseburn, who really gave a very good short essay on this most vexed subject. He did not believe that arbitration would prevent strikes, neither would any amount of education cure the evil, as the masters, who are generally well educated, do not always act right. He believed that co-operation was a step in the right direction. Those are not simple partnerships, otherwise there would be disputes as to whether labour or capital got a fair share of the profits. The opponents of this system say that owners will not open their works to the workmen for them to throw in their own capital; but the working men have the remedy in their own hands. They can open co-operative works of their own, and that would bring the employers to their senses. Supposing a case where 5000 men were employed; a shilling per week might be saved by each man, and this would produce in four years 60,000/-, and this sum could be invested in works. This is only a short abstract of the contents of the speech, which contains good ideas, whether the author has discovered a cure for strikes or not.

RATING OF MINES.

The Bill introduced by Mr. PERCY WYNDHAM on this subject was considered at an influential meeting of the Cornwall County Assessment Committee, held at the Royal Hotel, Truro, on Wednesday. The bill provides (1) that all mines shall be rated; (2) that where a mine is let to a tenant the royalty shall be considered the gross estimated value; (3) that allowance shall be made for the exhaustion of the corpus; (4) that occupiers may deduct one-half the rates from the dues under existing leases; and (5) that in Cornwall, Devon, and Derbyshire owners, instead of occupiers, shall be rated.

Mr. ROBARTES, M.P., remarked that the fifth clause would probably be erased by the House. He requested the opinion of the meeting on the second clause. As to the fourth clause, proposing that in the case of existing leases the occupiers of a mine should be allowed to deduct half the rates, he thought it was very fair. However, he had always believed the whole ought to be deducted, and he knew from what he had heard in different parts of the county that there would be no objection to the deduction of the half.—Mr. KENDALL, M.P., observed that if clause 5 were thrown out another point arose, whether it was possible so to modify clause 2 as to meet the difficulty.—Mr. ST. AUBYN, M.P., entirely agreed with what the previous speaker had said. The position was one of considerable difficulty, and ought to be well considered. The second reading would have to be decided upon before they knew the fate of the fifth clause; and, as they could not go back after that clause had been disposed of, it would be necessary for them to provide against the possible contingency beforehand.

Mr. DEEHL BOGER was not quite aware of the importance of the fifth clause, and thought it almost impossible to view the clause except in relation to each other. The principle of the Bill was the rating of royalties. This particular clause said that the owners should be rated, and not the occupiers. He did not see that it mattered much which.—Mr. P. P. SMITH said that in clause 2 it said "the royalty or rent reserved as payable to the owner shall, unless the contrary is shown, be deemed the gross estimated rental." Clause 5 contained no such words as "until the contrary be shown," but made the "rent, royalty, toll, or due" the basis of assessment without any qualification. With this exception, he did not see why clause 5 were rejected clause 2 should not be allowed to stand.

Mr. CHILDS thought the county would be quite content to accept a Bill assessing the lord. In respect of their dues, but as this measure stood it was objectionable. He knew cases in which it would make mines pay the greater part of the rates of their parishes.—Mr. BOGER suggested the addition to the Bill of a proviso that for the payment of rates the ores and machinery of the mines should primarily be distrainable, and that then in default the owners should be liable. They were suffering from the miserable quibble which put mines in which dues were reserved in kind upon a different footing from those in which there was money payment.—Mr. TYACKE thought if the five words "until the contrary be shown" were struck out of clause 2, the Bill might pass without injury if clause 5 were expunged.

It was then resolved to request the county members to support the second reading of the Bill; and it was eventually decided, on the motion of Capt. TEAGUE and Mr. MORCOM, to adopt the proposition of the High Sheriff (Mr. T. S. BOLITHO), who, in conjunction with Mr. CORNISH, had drawn up a resolution to the effect that clause 2 should be altered to prevent the rating of anything beyond royalty, a proportionate equivalent being added to the sum virtually paid in respect of any bonus that might have been given at the granting of any lease.—On the motion of Lord FALMOUTH, seconded by Mr. BASSETT, a committee, consisting of Messrs. T. S. BOLITHO, D. BOGER, P. P. SMITH, DINGLE, C. CHILDS, F. DILL, J. TAYLOR, T. CORNISH, G. CLYMA, WARINGTON SMYTH, R. W. CHILDS, and Capt. TEAGUE, was appointed to consult with the county members from time to time when the Bill came before Parliament.

SCOTTISH AUSTRALIAN INVESTMENT COMPANY.

A general meeting of proprietors was held at the London Tavern, yesterday, Mr. CHARLES WHETHAM in the chair.

The notice convening the meeting having been read, the report of the directors (an abstract of which appeared in last week's Journal) was taken as read.

The CHAIRMAN, in moving its adoption, referred at some length to its salient points. He need hardly say that the half-year embraced in these accounts was always the most unproductive portion of the year in Australia, and the board generally kept a reserve from the other more profitable six months, with the view so far as possible of equalising dividends. The manager (Mr. Morehead) being present on a visit to England, he could not do better than ask him to give his views on the position and prospects of the company's pastoral property.—Mr. MOREHEAD read some notes, in which he stated his views, and expressed a favourable opinion as to the result to be derived from the important investment known as the Landsborough Runs, at Bowen Down, and the Gulf of Carpenteria, in Queensland.—Mr. YOUNG seconded the motion for the adoption of the report and accounts.

Mr. MANSFIELD expressed his doubts as to the remunerative character of sheep farming; and, in support of his opinion, instanced the unsatisfactory results realised by two other Australian companies which had for many years devoted themselves to that pursuit.

Mr. YOUNG thought he knew the companies alluded to, and that they had lost their money by other operations than sheep farming, from which latter, indeed, all their profits had been derived.—A PROPRIETOR suggested that so soon as a good profit could be realised the sheep farming property, or portions of it, should be sold.—Mr. MOREHEAD quite admitted that sheep farming might not prove to be successful; but looking at the property the company possessed, he must say he regarded it in a much more favourable view. It did not seem to him any other than a fitting element, although, of course, he was subject to correction, for an investment company to hold a pastoral property. He thought that in a great many instances losses had been made for want of a good system of management. The plan he should think advisable to adopt was always to let the profits from the pastoral property accumulate to some extent before anything was divided. But, after all, one of the alternatives always had been that the property, or part of it, should be held only temporarily.

Mr. YOUNG said that he did not wish to undertake the office of prophet, but he thought, judging from his own experience in the investment of capital in sheep farming in the colony, that good result was likely to attend the company's operations at Landsborough Runs. Of course care and judgment must be exercised in these matters, and a great deal depended upon the character of the country, which in the case of their lands was all that could be desired.

After some further discussion, the report was received and adopted unanimously, and a dividend at the rate of 10 per cent. per annum (less income tax) was declared, payable on the 12th proximo.

Messrs. A. L. Elder and F. P. Ward were unanimously elected directors in the m of Mr. Kendall, resigned, and Mr. Dickson, deceased. Mr. W. B. C. Newell was re-appointed auditor.

vote of thanks to the Chairman and directors was passed, which terminated p roceedings.

[For Meetings of other Companies see Supplement to this day's Journal.]

[ADVERTISEMENTS.]

From Mr. EDWARD COOKE:—The market has undergone little change during the past week, and prices are without much alteration. It is a good time to buy into several mines that hold out great prospects of success, and which are now selling at prices that can scarcely fail to give a large profit upon present outlay. I would name North Treskerby, West Drake Walls, New Wheal Lovell, West Caron, East Trumpet Consols, Caldbeck Fells, West Kitty, Frank Mills, Prospect United, West Great Work, and North Croft, among the non-dividend; and the following among the dividend mines:—Great Wheal Vor, East Lovell, Wheal Seton, Great Laxey, West Chiverton, Trumpet Consols, and Tincroft. All the above are eligible, either for speculation for a rise or investment, and the time has arrived when they may all be bought into with safety.

From Messrs. WARD and JACKMAN:—During the week there have many enquiries for shares, in both dividend and progressive mines, but in the latter description, owing to symptoms of improvement in prospects, sellers have not been so anxious to realise. We have endeavoured to show that though a degree of risk must, and always will, attach to mining, yet it is not that "leap in the dark" so often represented. Machinery has arrived at such perfection, and labour so economised, that it is an unlike what it was a few years ago as chalk and cheese; and even when heavy panes have occurred no property has stood the shock, or kept its value so steadily, as well-conducted mines. Under these impressions, we do not hesitate to recommend these securities, and in doing so we fearlessly state there is no industry which will afford more profitable results, if prosecuted with the necessary knowledge. We subjoin a few extracts from advices received this week from our correspondents:—THE CLIFFORD AMALGAMATED MINES are looking better than when the last report was sent out, and an improved standard for tin and copper would soon place them in the Dividend List. When we consider that these mines are selling for less than 17,000/-, when the machinery alone cannot be worth less than 30,000/-, it appears preposterous. WEST FRANCES have risen to 40/-, and, considering the indications of further discoveries, are cheap. They have at present a splendid lode in the 85 fm. level, worth for tin over 90/- per fm. There are two levels in the 77 and 95, not so far in advance as the 85, but which will be so in about two months; and if these prove equally good the shares must go to 100/-, if not higher. EAST BASSET is selling for rather better than 5000/-! No one will look at the shares now they

can be had so cheap. It was just the same with WEST FRANCES, a few months since, when selling at 9/-—now 40/-! The tribute pitches at EAST BASSET are looking better than for months past. The new shaft is sunk 5 fms. below the 130 fm. level, and the lode is a kindly one, producing occasional stones of green copper ore; and from present appearances a productive lode is soon expected to rise in the back of the 130 west. North Treskerby, North Croft, East Caron, West Drake Walls, West Prince of Wales, and Buller are "still" low-priced shares, and should not be neglected because they are so. We refer to our advertisement on the front page, where the latest closing prices (Friday evening)

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THE MINING JOURNAL.

Contract for Coals for Haulbowline.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that on TUESDAY, the 11th February next, at Two o'clock, they will be READY to TREAT with such persons as may be willing to CONTRACT for SUPPLYING and DELIVERING into Store at Her Majesty's Naval Yard at Haulbowline,

SEVEN HUNDRED TONS OF SMOKELESS SOUTH WALES COALS,

for the service of Her Majesty's steamships and vessels. The coalsto be delivered by the 11th March next.

A form of the tender and conditions of contract may be seen in the lobby of the Storekeeper-General's Department, Admiralty, Somerset House. No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals for Haulbowline," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by a responsible person, engaging to become bound with the person tendering in the sum of £25 per cent. on the value for the due performance of the contract.

By order, ANTONIO BRADY,
Registrar of Contracts and Public Securities.

Contract Department, Admiralty, Somerset House, Jan. 24, 1868.

Contracts for Military Purveyor's Stores.

NO NOTICE IS HEREBY GIVEN, to all PARTIES DESIROUS of TENDERING for the SUPPLY of such QUANTITIES of the UNDERMENTIONED ARTICLES, namely:-

- 1.—MUSTARD, PEPPER, SALT, &c.
- 2.—BLACKING, and other cleaning articles.
- 3.—BOTTLED ALE and PORTER, SHERRY and BRANDY.
- 4.—MILK, FOWLS, EGGS, and FISH.
- 5.—POTATOES, VEGETABLES, LEMONS, ORANGES, &c.,

as may be required during a period of twelve months from 1st of March, 1868, for the service of the Military Hospitals at Aldershot Camp.

That particulars and forms of tender may be obtained by application to the Principal Purveyor to the Forces, at his office, New Hospital, South Camp, Aldershot.

Sealed terms must be delivered at the said office of the Principal Purveyor, properly filled up and signed (in triplicate), one or before the 8th February, 1868, accompanied by samples.

W. J. A. TUCKER, Principal Purveyor to the Forces.

ELFFORD, WILLIAMS, AND CO., COPPER ORE WHARFINGERS, SHIP BROKERS AND COAL EXPORTERS, METAL AND GENERAL COMMISSION AGENTS, SWANSEA.

ELFFORD, WILLIAMS, and Co. having erected an assay office, and engaged the services of a practical Cornish assayer, who will devote his whole time to the branch of their business, they are now in a position to make correct assays of silver, copper, and other mineral ores, on the most moderate terms.

SILVER ORES.

COLONEL DAVID E. BUEL, late Commissioner from Nevada (U.S.) to the Paris Exposition, has on EXHIBIT the LARGE COLLECTION of SILVER ORES from that STATE at Room 108, Palmerston-buildings, 34 Old Broad-street, E.C.

The Colonel most cordially invites the public to call and examine the collection, where he will be pleased to impart all information in his power in regard to the mining development of the Western Coast of America.

In the Press, and will be published early in February, to be continued quarterly, in small 4to, bound in cloth, price Five Shillings.

INDEX TO THE TIMES NEWSPAPER FOR 1867. AUTUMNAL QUARTER—OCT. 1 to DEC. 31.

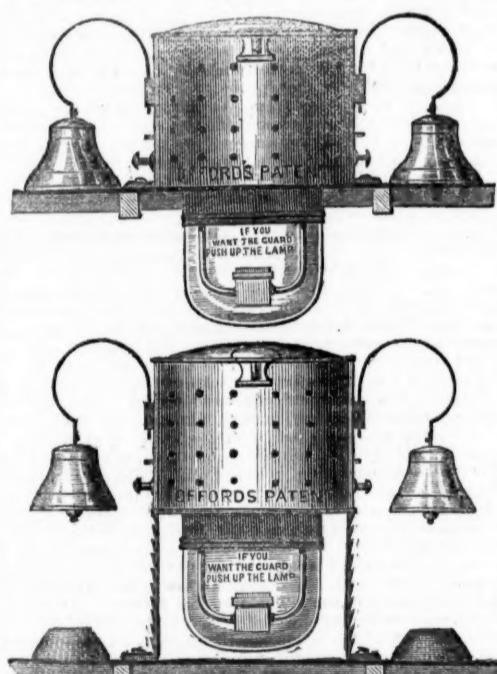
This index is *in extenso*: the births, deaths, marriages, bankruptcies, wills, civil and criminal cases, parliamentary proceedings, speeches, local, scientific, mining, and foreign news, naval and military intelligence, are all classified in full, and the index so arranged as to do for any file without paging or marking.

London : SAMUEL PALMER, 29, Catherine-street, Strand.

The editor respectfully solicits subscribers to his Index. Without it the Times, though the most gigantic engines of the press, dies daily; but with it becomes the never-fading memoir of the world's history, the unfaultering reference-book for all classes and societies.

INTERCOMMUNICATION BETWEEN PASSENGERS AND GUARD.

Although the number of suggestions for effecting a communication between passengers and guard has been very great, not one has been considered worthy of general adoption, the opinion of most persons practically connected with railway affairs being that, judging from experience, the English are too fond of mischief to be trusted with such a powerful instrument of danger as the means of stopping a train; and that, even assuming a means of communication were desirable, there is no contrivance equal in simplicity or efficiency to the American system of a cord and bell. Adopting similar views, Mr. J. OFFORD, W.C., of Wells-street, has devised an arrangement in which even the use of the cord is dispensed with. The arrangement will be at once understood by reference to the subjoined diagrams, the first of which shows the apparatus in ordinary travelling trim, and the second its appearance when the signal is being given :-



It is claimed that the expense of the arrangement will be but trifling, as the ordinary lamp, which already exists in each compartment, is made available with the addition of one or more bells, attached by springs to the protector, as now used with every lamp. By means of two springs and ratchets, as shown in the drawing, the lamp rises by anyone gently pushing at the bottom of the glass, and the bells leave the small blocks on which they rest, and ring rapidly until the train is stopped, or the lamp lowered, which can only be done from the roof. The signal needs no attention, and is always ready for action, and it cannot be tampered with without its being discovered who has done so. It is believed that, from the fact of there being a signal, all attempts at robbery or violence will cease, which, combined with the check upon accidents, will cause many more persons to travel, and thus increase the revenue of the railways much more than the cost. The spot where attention is required is at once seen, either day or night, without additional lights, and unimpeded by curvers or lights from the windows. Among other advantages, this signal would be plainly seen at all the stations, and it cannot be prevented from acting.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending January 26 amounted to 9690L 10s. 3d.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST BASSET AND GRYLLS MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the above-named company who have not received notice from the Registrar of the said Court that their claims have been already admitted are hereby required to COME IN AND PROVE THEIR SEVERAL DEBTS OR CLAIMS at the Registrar's Office, Truro, on Tuesday, the 11th day of February next, at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT OF ANY DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court or before any Court Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL, Registrar of the above-named Court, Truro, Cornwall.

Dated Registrar's Office, Truro, January 29th, 1868.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the GOONINNIS MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 20th day of January instant, presented to the Vice-Warden of the Stannaries by James Saunders the Elder, a contributory and also a creditor of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, Truro, in the county of Cornwall, on Thursday, the 29th day of February next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioner, his solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 17th day of February next, and notice thereof must at the same time be given to the petitioner, his solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall.

(Solicitors for the Petitioner);

GREGORY, ROWCLIFFE, AND RAWLE, of No. 1, Bedford-row, London.

Agents of the said Solicitors.

Dated Truro, the 28th day of January, 1868.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the PENHAL MOOR MINING COMPANY.—By direction of His Honour the Vice-Warden, notice is hereby given that, on the 10th day of February next, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, in the county of Cornwall, this Court will PROCEED to MAKE a CALL of FIFTEEN SHILLINGS PER SHARE on all the contributors of the above-named company, under Class A.

All persons interested therein are entitled to attend at the time and place appointed to offer objections to such call.

Dated Truro, January 27th, 1868.

WM. MICHELL, Registrar.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL LOVELL MINING COMPANY.—TO BE SOLD, BY PUBLIC AUCTION, at and upon the WHEAL LOVELL MINE, situate in the parish of Wendron, in the county of Cornwall, under the direction of the Registrar of the said Court, on Tuesday, the 11th day of February next, at Twelve o'clock at noon, subject to such conditions as shall be then and there produced, together or in lots, all the INTEREST of the SAID COMPANY of and in the SETT or GRANT by virtue of which the mining operations of the said company have been carried on, and the undermentioned

MINING MACHINERY, MATERIALS, and EFFECTS,

Now at the said MINE, viz.:—

STEAM ENGINE, 50 in., 9 ft. stroke in cylinder, with first piece of rod, with wadework of engine-house.

TWO BOILERS, 19 tons, with fittings.

Steam WINDING ENGINE, 16 in., 4 ft. stroke, with fly wheel and whm cage.

Steam STAMPS ENGINE, 24 in., 8 ft. stroke, with two fly wheels and cranks attached.

ONE BOILER, 10 tons, with fittings; 2 stamps axles, with cranks, blocks, and brasses, 24 heads; wood frames, with bolts in the same, and a variety of other effects.

To view, apply to Mr. JAMES JAMES, at the mine.

JOSEPH ROBERTS, Solicitor, Truro.

Dated Registrar's Office, Truro, 29th January, 1868.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL UNITY CONSOLS MINING COMPANY.—TENDERS will be RECEIVED at the Registrar's Office, Truro, until FRIDAY, the 14th day of February next, stating the highest price which will be given for the whole or any part of the

MINING MACHINERY AND MATERIALS,

At WHEAL UNITY CONSOLS MINE, in the parish of Gwinear, within the said Stannaries, viz.:—

40 in. cylinder PUMPING ENGINE, with 2 ton BOILERS, complete; steam WHIM ENGINE, 26 in. cylinder, with a 6 ton BOILER; capstan, vice, and a variety of other articles and effects in general use in mines.

For leave to inspect the same, apply to Mr. THOMAS BASSETT in charge therof.

HODGE, HOCKIN, AND MARRACK, Truro.

(Agents for S. T. G. Downing, Solicitor, Redruth).

Dated Registrar's Office, Truro, January 29, 1868.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the CARNYORTH MINING COMPANY.—The Registrar of this Court has appointed FRIDAY, the 14th day of February next, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WM. MICHELL, Registrar of the said Court.

Dated this 30th day of January, 1868.

THE NEW HOUSE COLLIERY, IPSTONES, near CHADEAU, about one mile from FROGATON STATION, on the Churnet Valley Branch of the North Staffordshire Railway Company.

HIGHLY IMPORTANT TO COLLIER PROPRIETORS, BUILDERS, ENGINEERS, AND OTHERS.

MESSRS. FERGYSYON AND SON are instructed to SELL, BY AUCTION, upon the aforesaid premises, on Thursday, the 4th day of February, 1868, the WHOLE of the COSTLY and MODERN WORKING PLANT, including valuable high-pressure horizontal ENGINE, 45 horse; ditto, 12-horse; condensing PUMPING ENGINE, upwards of 250 horse, cylinder 76½ in. diameter, engine beam about 18 tons; excellent new Cornish and egg-ended BOILERS, complete; treble purchase capstan, to lift 15 tons; tee bob, 6 tons 10 cwt.; ditto, 7 tons 5 cwt., with wrought-iron fittings, &c., complete; large connecting rods; double throw crank; force pump, with brass valves, &c., complete; pit head gear; cast iron eister; 60 yards of 13 in. pump trees; upwards of 100 yards of pitch pine pump rods, with straps; new 14 in. ram, 12 ft. long; 112 in. ditto, 5 ft. stroke; slack pieces, &c.; quantity of 8 in. pitch pine rods and straps for ram; weighing machines; pit wagon; buckets; bridge rails; wire and hemp ropes; an immense quantity of engineers', blacksmiths', carpenters' and other tools; screw keys; bolts; bridles; lashing and drag chains; timber; and a multiplicity of other truly valuable plant too numerous to particularise.

Sale at Twelve o'clock to the minute.

Descriptive catalogues will be ready eight days previous to sale, and can be had on application to the auctioneers, Market-place, Leek.

PRELIMINARY ANNOUNCEMENT.

LANCASHIRE STEEL COMPANY (LIMITED).

MR. WHEATLEY KIRK is honoured with instructions from the Official Liquidators of the Lancashire Steel Company (Limited) to SELL, BY AUCTION, shortly, at the Clarence Hotel, in Manchester, the EXCEEDINGLY VALUABLE PROPERTY, constituting their PATENT FILE WORKS AT MANCHESTER, viz.:—Land, buildings, steam-engines, boilers, shafting and mill-gearing, steam, water, and gas pipes, plant, machinery, utensils, &c.

Full particulars in future papers, or, in the interim, of Messrs. SLATER and BROWNING, Esq., official liquidators, 108, King-street; or the auctioneer, Essex-street, King-street, Manchester.

114

NEW PLANING MACHINES, WARRANTED, will plane 6 ft.

6 in., by 2 ft. 10 in., by 2 ft., £25; 6 ft., by 2 ft. 9 in., by 2 ft. 3 in., £20.

WHEATLEY KIRK, Engineer, &c., Manchester.

115

NEW SLIDING AND SCREW-CUTTING GAP LATHES,

warranted, 7½ in. centres, 12 ft. bed, £45; 8 in. centres, 13 ft. bed, £55;

9 in. centres, 10 ft. bed, £55; 12 in. centres, 20 ft. bed, £120. All ready for delivery.

Engines, mortars, mills, and other engineers' and contractors' tools and plant at equally low prices.

WHEATLEY KIRK, Engineer and Valuer, Manchester.

116

THE MINERS' MANUAL OF ARITHMETIC

AND SURVEYING.

By WILLIAM RICKARD.

Teacher of Practical Mining in the late Mining School of Cornwall, and Principal of the Engineering Academy, 36, Upper Parliament street, Liverpool.

Truro: Heard and Son, London: Longman and Co.; the office of the MINING JOURNAL, 26, Fleet-street; of the author, and of all booksellers.

NORTH STAFFORDSHIRE.

TO BE SOLD, and may be NEGOCIATED FOR BY PRIVATE TREATY, all that VERY VALUABLE FREEHOLD ESTATE, known as

THE WOODSHUTTS ESTATE,

comprising several FARMS and LANDS, situate near to HARECASTLE STATION, on the North Staffordshire Railway; together with the WHOLE of the VALUABLE MINES OF COAL thereunder and under adjoining lands

(not the property of the vendor).

The surface of the estate comprises an area of 290 acres, or thereabouts.

The total area of the mineral is 360 acres, or thereabouts.

The whole of the mines are in lease to the Woodshutts Colliery Company for

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NICHOLLS, MATHEWS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION. ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.

Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices!

JOHN HOCKING AND SON, ENGINEERS, REDRUTH,
CALL THE ATTENTION of COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of second-hand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, removal, &c., of every description of mining machinery undertaken.

FOR SALE, ONE 22 in. HORIZONTAL, and ONE 24 in. VERTICAL TIDATORY ENGINE.

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.

London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

RAILWAY CARRIAGE COMPANY (LIMITED)
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.

Passenger carriages and wagons built, either for cash or for payment over a period of years.

RAILWAY WAGONS FOR HIRE.

CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET,
WESTMINSTER.

THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.

EDMUND FOWLER, Sec.

WAGON WORKS.—SMETHWICK, BIRMINGHAM.

** Loans received on Debenture; particulars on application.

London Agent.—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED)
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTOR WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION of RAILWAY ROLLING STOCK.

OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.

LONDON OFFICE,—118, CANNON STREET, E.C.

COAL CUTTING MACHINERY.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

All communications to be made to Messrs. FIRTH, DONISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

IMPROVED APPLICATION OF WATER POWER.

THE TURBINE.

MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, after twenty years of experience, have brought their IMPROVED TURBINE to great perfection.

It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.

On low falls it has the great advantage of not being impeded by floods or backwater.

It is particularly well adapted for situations where the quantity of water is variable, and where all other wheels fail.

Its motion is extremely regular, and, when desired, a governor can be applied effectively.

This wheel is at work in a great many places, to which reference will be given.

RED LEAD SUPERSEDED.

NEW "ANTI-CORROSIVE METALLIC PAINT."—

For some years past Messrs. PEACOCK and BUCHAN have been making great experiments with an ECONOMICAL and entirely new metallic mixture of an ANTI-CORROSIVE nature, to supersede RED LEAD as an UNDERCOATING for iron ships' bottoms, and for priming and painting their hulls outside and in, as also all kinds of out and indoor ironwork, railway plant, &c., as well as for outdoor woodwork, stone, and stucco, &c. Any colour paint will lay on over it. The proprietors have now perfected this metallic paint, and it will be found considerably cheaper than RED LEAD, at the same time effectually preserving the iron from rust, scaling, and decay.

It is ground in oil by steam-power, and packed in ironbound casks from 1 to 3 cwt. each. Price, delivered at Southampton, 32s. 6d. per cwt., packages included. Apply, in London, to W. J. MOYSEY, 39, Upper East Smithfield; and, in Southampton, to Messrs. PEACOCK and BUCHAN, or their accredited agents in all the principal cities and seaports of the kingdom.

SIX POUNDS PER WEEK
While laid up by injury, and
ONE THOUSAND POUNDS IN CASE OF DEATH CAUSED BY ACCIDENT
OF ANY KIND.

May be secured by an annual payment of from £3 to £6 5s.

TO THE
RAILWAY PASSENGERS' ASSURANCE COMPANY.

RAILWAY ACCIDENTS ALONE.

May also be provided against by insurance tickets for single or double journeys.

For particulars apply to the Clerks at the Railway Stations, to the Local Agents, or at the

OFFICES,—64, CORNHILL, and 10, REGENT STREET, LONDON.

W. J. VIAN, Sec.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)

Published every Saturday, price 2d., or quarterly 2s. 2d.

THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.

Published every morning. Price 1d.

Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

NERVOUS DEBILITY: ITS CAUSE AND CURE.—Before seeking aid from the so-called remedies without medicine, read this valuable work on the Treatment and Cure of Nervous and Physical Debility, Loss of Appetite, Palms in the Back, Spermatorrhœa, &c., with Plain Directions for Perfect Restoration to Health. Sent post free to any address, on receipt of two postage stamps. Letters of enquiry or details of case promptly answered.

Address, Dr. SMITH, 8, Burton-crescent, London, W.C.

DR. WATSON (of the Lock Hospital), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Loss of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration. Sent free for two stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 3, and 6 till 8; Sundays, 10 till 1.

Just published, post free for two stamps, **WONDERFUL MEDICAL DISCOVERY**, demonstrating the true causes of Nervous, Mental, and Physical Debility, Loss of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C.

CONSULT DR. HAMMOND (of the Lock Hospital, &c.), No. 11, Charlotte-street, Bedford-square, London, W.C., in all those ailments which tend to embitter and shorten life, and especially those termed peculiar and confidential. At home, Nine to Two, and Three to Eight; Sundays, Ten to Twelve. The "Self-Curative Guide" post free, two stamps.

N.B.—Cases of recent infection cured in two days.

ELECTRICITY IS LIFE.
CURE YOURSELF BY THE PATENT SELF-ADJUSTING CURATIVE AND ELECTRIC BELT.—Sufferers from nervous debility, painful dreams, &c., can now cure themselves by the only guaranteed remedy in Europe, protected by Her Majesty's great seal. Free for one stamp by H. JAMES, Esq., Percy House, Bedford-square, London.

N.B.—Medicines and fees superseded.

Reference to the leading Physicians of the day.

HEATON'S PATENT STEEL.

THE Langley Mill Steel & Ironworks Company (LIMITED),

Langley Mill, Near Nottingham,

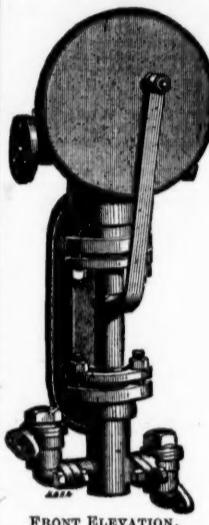
Are now making this Steel according to Mr. HEATON'S PATENTS, dated 17th March, 1866, and 3d May, 1867, under the direct superintendence of the Patentee.

It has been tested in a great variety of ways, and is found to be at least equal to any that can be met with. It is uniform in quality, and is suitable for any purpose to which high-class steel can be applied.

Samples and prices can be obtained on application to the company; or to any of their recognised agents.

THE NEW PATENT INJECTOR,

FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.



Size.	Ram. in.	Stroke. in.	PRICES, DELIVERED IN LONDON.			Price.
			Approx. horse-power boiler supplied.	At 100 rev. 150 rev. 200 rev. p. min.	gallons thrown per hour.	
No. 4	1 1/2	3	15	115	172	230 £10 10
5	1 1/2	3	22	180	270	360 12 12
6	1 1/2	4	30	240	360	480 14 14
7	2 1/2	4	40	345	517	690 17 0
8	2 1/2	5 1/2	55	475	712	956 19 10
9	2 1/2	5 1/2	75	585	877	1170 22 10
10	2 1/2	6 1/2	90	720	1080	1440 25 10
11	2 1/2	6 1/2	110	870	1305	1740 28 10
12	2 1/2	8	120	1080	1645	2060 31 10
*14	3	8	230	2450	3675	40 0
*16	3 1/4	8	460	4900	7350	55 0

* The last two are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.

Terms: Nett Cash on Delivery.

A CIRCULAR, WITH FULL EXPLANATION AND COMPARISONS, WILL BE SENT ON APPLICATION.

BROWN, WILSON, AND CO.,
No. 80, CANNON STREET, E.C.; AND VAUXHALL IRON WORKS, LONDON, S.

ISAAC STOREY AND SON,

MAKERS OF

DOMES AND OTHER FITTINGS FOR LOCOMOTIVE ENGINES,
STILLS, PANS, AND GENERAL COPPER WORK,
IMPROVED WATER GAUGES, BLOW-OFF COCKS, SAFETY VALVES, FUSIBLE PLUGS, &c.,
As recommended by the Steam-Boiler Associations.

GENERAL STEAM WORK, WHEEL VALVES, SLUICE VALVES, COCKS, &c.

IMPROVED GAS VALVES.

BABBITT'S AND FENTON'S PATENT ANTI-FRICTION METALS,
Wholesale Agents for Bourdon's, Schaeffer's, and other good Makers of

STEAM AND VACUUM GAUGES;

Richard's, McNaught's, and Hopkinson's

STEAM ENGINE INDICATORS.

Wrought Iron Tubes and Fittings for Steam and Gas Work.

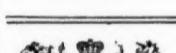
KNOTT MILL BRASS AND COPPER WORKS,

AND AT
24, DEANSGATE,
NEAR THE EXCHANGE.

LITTLE PETER STREET,

MANCHESTER.

Illustrated Lists on Application.



PATENT FLEXIBLE TUBING, AND BRATTICE CLOTH FOR MINES

MANUFACTURED BY

ELLIS LEVER,

WEST GORTON WORKS, MANCHESTER.

GREEN SLATES.

GREEN SLATES OF ANY SIZE, and of the CHOICEST COLOUR and QUALITY, can now be OBTAINED from the DOROTHÉA WEST SLATE COMPANY (LIMITED), CARNARVON.

The "CHARING CROSS HOTEL," "STAR AND GARTER HOTEL" (Richmond), "LONDON BRIDGE HOTEL," and many other public buildings, are covered with these elegant slates.

Orders will be executed in regular succession.

Apply to Mr. THOMAS HARVEY, General Manager, 9, Segontium-terrace, Carnarvon, or 33, King-street, Cheapside, London.

GALLOWAY BOILER TUBES.

J. JACKSON AND CO., ENGINEERS, LONDON, E.C.

BASTIER'S PATENT CHAIN PUMP.

PUMPS WITH STEAM ENGINES, AND CATTLE,
WIND, OR HAND-POWER GEAR,

Manufactured by the proprietors of the patent,

J. JACKSON AND CO.,
17, GRACECHURCH STREET, LONDON, E.C.

PRICE LISTS ON APPLICATION.

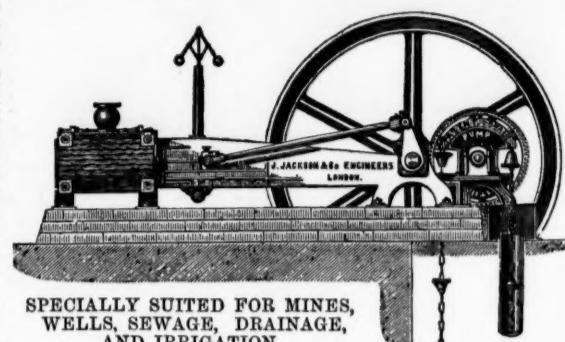
FOR THE COUNTIES OF NORTHUMBERLAND, DURHAM, YORK,
DERBY, AND NORTH STAFFORD, APPLY TO

MR. THOMAS GREENER,
MINING OFFICE, NORTHGATE, DARLINGTON:

AGENTS FOR SCOTLAND,

MESSRS. P. AND W. MACLELLAN,
127 and 129, TRONGATE, GLASGOW.

A SMALL PUMP MAY BE SEEN AT WORK ON APPLICATION TO MESSRS. J. H. GREENER AND CO., 5, JOHN STREET, ADELPHI, W.C., WHO WILL ALSO SUPPLY ANY INFORMATION REQUIRED.



SPECIALLY SUITED FOR MINES,
WELLS, SEWAGE, DRAINAGE,
AND IRRIGATION.

This is the most efficient pump ever introduced to public notice for deep vertical lifts. It is cheap in its first cost, requires no cleaning and little attention, and the cost of maintaining it with duplicate working parts is very small.

The water is lifted through vertical tubes. At every interval of yards a contracted part, or working barrel, is inserted, smaller in diameter than the main pipe, one of which is always placed at the lower end. An endless chain passes over the driving wheel at the top, going down free, and coming up through the tube, into which it enters by a bell-shaped mouth-piece. On this chain are fixed india-rubber discs, smaller in diameter than the main pipe, but fitting tight in the working barrels, so that all the water that enters is forced and carried through the main pipe. The discs being free all round from the pipe for nine-tenths of the whole distance, reduces friction to a minimum.

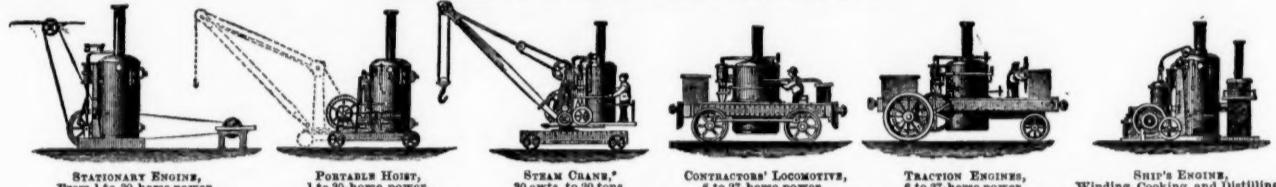
Eighty-seven per cent. of the whole area of the tube is lifted in water. A 3½ in. pump has lifted 120 gallons per minute, from a depth of 270 ft., with 10·75 indicated horse power; other sizes in proportion. These pumps are now at work throughout England, sizes varying from 3½ to 15 in. diameter, and up to 300 ft. deep.

A SMALL PUMP MAY BE SEEN AT WORK ON APPLICATION TO MESSRS. J. H. GREENER AND CO., 5, JOHN STREET, ADELPHI, W.C., WHO WILL ALSO SUPPLY ANY INFORMATION REQUIRED.

1148

CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862.



STATIONARY ENGINE, 1 to 30-horse power. No building required.

PORTABLE HOIST, 1 to 30-horse power. With or without jib.

STEAM CRANE, 30 cwt. to 20 tons. For wharf or rail.

CONTRACTORS' LOCOMOTIVE, 6 to 27-horse power. For steep inclines and quick curves.

TRACTION ENGINES, 6 to 27-horse power. Light and heavy.

SHIP'S ENGINE, Winding, Cooking, and Distilling.

Passed by Government for half water.

* These cranes were selected by H.M. Commissioners to receive and send away the heavy machinery in the International Exhibition.

From the STRENGTH, SIMPLICITY, and COMPACTNESS of these ENGINES they are extensively USED for GENERAL PURPOSES, and also in situations where STEAM-ENGINES OF THE ORDINARY CONSTRUCTION CANNOT BE APPLIED.

1149

ALEXANDER CHAPLIN AND CO., PATENTEES AND SOLE MANUFACTURERS,

CRASTONHILL ENGINE WORKS, GLASGOW.

ENGINES OF EACH CLASS KEPT IN STOCK for SALE or HIRE, and ALL OUR MANUFACTURES GUARANTEED as to EFFICIENCY, MATERIAL, and WORKMANSHIP.

Parties are cautioned against using or purchasing imitations or infringements of these patent manufacturers.

1150

IMMENSE SAVING OF LABOUR.

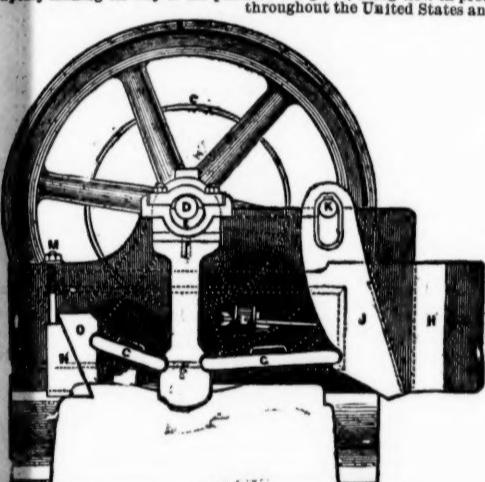
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Eaton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw's about 30 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.

THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent.

WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.

WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.

Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.

JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

WM. G. ROBERTS.

General Fremont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 20 men, or £75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate.

SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE's, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

PATENT STEAM CRANE.
PARIS EXHIBITION, 1867—AWARDS, Silver Medal for STEAM CRANES.
Bronze Medal for DONKEY FEED PUMPS.

APPLEBY BROTHERS,

EMERSON STREET, SOUTHWARK,
LONDON, S.E.,

Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.

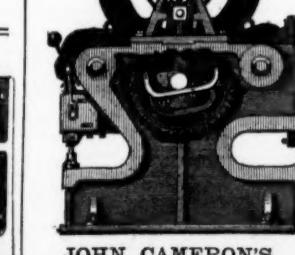
PATENT DONKEY PUMPS.

Ram.....	1½ in.....	2 in.....	2½ in.....	2¾ in.....	2½ in.....	3 in.....	3½ in.....	3½ in.....	4 in.....
*Gall. per hour..	230	400	680	850	1200	1500	2100	2500	3800
Approx. H.P....	15	25	40	50	80	95	130	160	230
Price	£105	£1210	£15	£18	£21	£24	£28	£30	£35

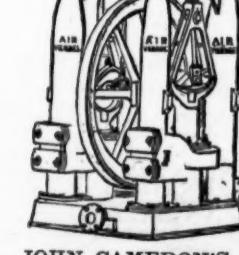
* Calculated at 200 strokes per minute.

TO LIFT, RADIADE, AND TRAVEL
BY STEAM.

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JOHN CAMERON'S
PATENT DOUBLE CAM LEVER
PUNCHING AND SHEARING
MACHINE,
1½ x 1½ in. x 24 in.=8 tons, £185.
WORKS,
EGERTON STREET, HULME,
MANCHESTER.



JOHN CAMERON'S
STEAM PUMPS,
From 2 to 12 in. diameter,
SINGLE AND DOUBLE-ACTING.
WORKS,
EGERTON STREET, HULME,
MANCHESTER.

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COAL-WASHING—ARTIFICIAL FUEL.

WANTED, DRAWINGS and PARTICULARS of COAL WASHING MACHINES, and ARTIFICIAL FUEL-MAKING MACHINES, for INDIA.
Particulars to be sent to Mr. MARK FRYAR, M.E., Laura House, Batham Bristol.

BORING MACHINES.

The Miners' Association of Cornwall and Devonshire.

THE REPORT FOR 1867 is now published, containing, in addition to the Report of Council, and other matters, Papers on Bergström's, Döring's, General Haupt's, Beaumont and Lock's, and Brunton's BORING MACHINES, together with Papers on the Application of Hydraulic Machinery to Mining Purposes.

The Report, price One Shilling, can be obtained of HEARD and SONS, Boncawen-street, TRIO; the MINING JOURNAL Office, No. 26, Fleet-street, London; LONGMANS, GREEN, READER, and DYER, LONDON.

GOOD INCOME ON SMALL OUTLAY IN FIRST-CLASS MINES.

M. CHARLES WATSON, 2, CROWN COURT, THREADNEEDLE STREET, recommends with confidence HALF-A-DOZEN VALUABLE MINES, paying from 10 to 20 per cent.

Mr. CHARLES WATSON has the FOLLOWING FIRST-CLASS SECURITIES for INVESTMENT:—Indian 5 per cent. Railways, guaranteed by the Council of India; Colonial Bonds; United States 5-20 Bonds; Brazilian and Egyptian Bonds pay from 5 to 8 per cent, as regularly as Consols. Turkish 1865 Loan pays 6 per cent, without liability.

A List of Dividend-paying Mines and of carefully selected Investments, sent free by Mr. CHARLES WATSON, Stock, Share, Consol, and Mining Dealer, 2 Crown-court, Threadneedle-street, E.C.

M. ESSRS. WILSON, WARD, AND CO., SHAREDEALERS,

16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

BUYERS of any number of Frontline and Bolivia, and New Great Consols, shares at full market price. A special report upon New Great Consols Mine can be had on application, post free.

We strongly recommend for investment the shares in the Penhale United Silver Lead Mining Company (Limited), the prospectus of which is just issued. We understand that nearly three-quarters of the shares are already subscribed for.

M. R. J. N. MAUGHAN, STOCK AND SHAREBROKER (Member of the Stock Exchange)

No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE,

Transacts business in Railways, Funds, and every description of Mines.

Bankers: Messrs. Lambton and Co.

M. ESSRS. KEANE AND CO., MINING AGENTS, AND SHAREDEALERS,

90, CANNON STREET, LONDON, E.C., and

BRIDGEWATER CHAMBERS, BROWN STREET, MANCHESTER.

M. R. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

Mining-Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent, per annum.

Offices: 5, Finbury-street, London, E.C.

M. R. E. GOMPERS calls the ATTENTION of his CLIENTS, FRIENDS, and the PUBLIC to the STATE of the EAST WHEAL RUSSELL MINE, and of the company by which it is worked. On April 13 last he inserted in the Mining Journal the following advertisement:—

EAST RUSSELL.—As the editor of the Mining Journal is supposed to know everything—at all events in connection with mines—perhaps he would inform the mining public if Mr. William Michell, of Cornhill, London, E.C., has invented entirely novel machinery for all sorts of mining operations—machinery not subject to "wear and tear," and proof against all accident. The impression that he has done so is natural, for in his advertisement last week in the Mining Journal he informs the world that the water has been "let in" to the workings of East Russell—whether from accident, design, or "necessity," he could not explain. If Mr. Michell will consult anyone who knows anything of mining, he will learn that, unless there was a general conspiracy, such an event could not happen by design. The operations at a mine are conducted by too many persons, in capacities too varied, for anyone, or a few, to accomplish by design such an injury as Mr. Michell advertises, without detection. It will hardly be supposed that all concerned will be accomplices to deprive themselves of employment. The idea is as absurd as the language in which it is implied by Mr. Michell is ridiculous. The truth is, accidents did occur, such as occur in every mine in the kingdom, and such as must frequently happen as long as machinery is made of material which may possibly give way, or until Mr. Michell's series of inventions comes into general use. Mr. Michell says the water has been let in the bottom workings. He, of course, means "let into"; and he obviously uses the form of expression to apply treachery somewhere. Who does he want the manager's situation for? Has he any friend or relative to whom it would be a windfall, and who might accommodate him by giving him preferential early information so useful to a mining broker? But "Brutus" is an honourable man. He is above the arts of a stock jobber; he would not for the world cry down the value of a mine by seizing upon an ordinary accident and blazoning it forth to alarm the shareholders, and effect a revolution in the management for his own purposes, in order to place there his lately-invented "Michell machinery." Suppose that, instead of listening to Mr. Michell "buying the mine," the shareholders inquire into facts, and the result is probable that they will refuse to be terrified, and will not require Mr. Michell's indestructible machinery.

On July 27 last he inserted another advertisement in the Journal, as follows:—
EAST WHEAL RUSSELL.—My friends and clients will do the Justice to recollect that at the time Mr. W. Michell was advising the purchase of these shares (the prices then being about £10. 10s.) I was strenuously advocating their immediate sale. The value of my advice is now practically attested inasmuch as since that period two calls (one of 5s. and the other of 4s. per share) have been made, and the price of the shares is not more than 30s. But it would appear by the list of shareholders that even Mr. Michell has availed himself of my advice as he now holds a considerably less number of shares than he did at the last meeting, which, of course, fully explains the reason that he was so conscientiously recommending the public to buy them. From the information I have received, the shareholders will be consulting their own interests by immediately abandoning the mine.

Now, what has happened since to the friends of these advertisement? and how far has their purport been made good by events? Mr. MICHELL has nearly disposed of all his shares, and has, of course, ceased to be the laureate of the mine. But laureates, like popes, live for ever, as the succession is sure; accordingly, Mr. PETER WATSON has stepped into the place of the officially defunct Mr. MICHELL, and sings the praises of this great institution. Mr. GOMPERS would warn his constituents against being seduced by the voice of this new charmer. There has been no discovery of importance, nor has any circumstance occurred to increase the value of the property. On the contrary, a call of 5s. has been made, and it is well known that 10s. instead would have scarcely sufficed. The present laureate is also a sage. At the meeting he presumed that but for the water in the bottom levels the profit would have been greater. The originality and profound wisdom displayed by this remark have the additional advantage of being very funny. Of course, if the water were not there, the difficulty its presence creates would have been absent; but to get it out costs money, and lessens profits, and if it were out, there might, nevertheless, be more expense in working than the ore was worth. Which of the dictionaries gives the best definition of "clap-trap?" Mr. GOMPERS would again offer advice, and it is very simple—it is that those concerned would allow the water to stay where it is.

E. GOMPERS, 3, Crown Court, Threadneedle Street, London.

Bankers: London and Westminster.

M. R. J. S. M. E. R. R. Y. ASSAYER AND ANALYTICAL CHEMIST, SWANSEA.

STEAM, ANTHRACITE, AND BITUMINOUS COAL.

M. R. EDMUND STRANGE PARSONS, OF NEATH, GLAMORGANSHIRE, who has had MANY YEARS EXPERIENCE in the PRACTICAL WORKING of COLLIERIES in SOUTH WALES, has to OFFER several VALUABLE FIELDS of EACH of the ABOVE DESCRIPTIONS OF COAL, which he could place before investors upon terms that cannot fail to be highly remunerative.

The most reliable information may be ensured as to the merits of any property in the Principality, upon moderate terms, and references of the highest character afforded.

M. B. H. D. HOSKOLD, MINING ENGINEER, LAND AND MINERAL SURVEYOR, CINDERFORD, NEWNHAM.

Gentlemen requiring reliable and correct information respecting any Coal or Iron Mine Property in the Forest of Dean may obtain it on application.

Surveys, Plans, Reports, and Valuations on the usual moderate terms.

MANCHESTER, AND WEST END OF LONDON.

M. R. W. HANNAH, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER, ROYAL INSURANCE BUILDINGS, KING STREET MANCHESTER; and 49, STRAND, LONDON, W.

INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

CONSULTING RAILWAY AND MINING ENGINEER, MR. TREDINICK, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON (Office of Registry of British and Foreign Mines). Vendors introduced to purchasers upon terms as may be agreed. Registration fee, 2s.

Plans and sections, with reports, carefully preserved, and open to inspection for a fee of 5s.

Railways and Mines should be selected with great caution, and those who hold will do well earnestly to look into the character and merits of those they now possess. The uninitiated should approach these securities only through the aid of practical authorities. Mr. TREDINICK can be confidently consulted, either personally or by letter, for a fee of 2s., and the services of efficient and practical brokers introduced, if required.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.	
1500 Alderley Edge, c, Cheshire*	10 0 0..	..	..	9 2 8..	0 5 0..	Nov.	1867
200 Botallack, t, c, St Just	91 0 0..	..	..	488 15 0..	5 0 ..	May	1867
4000 Brookwood, c, Buckfastleigh	1 11 0..	..	..	0 7 6..	0 2 6..	Dec.	1867
1000 Bronfloyd, t, Cardigan*	12 0 0..	..	..	0 3 0..	0 6 0..	Jan.	1868
6400 Cashwell, t, Cumberland*	2 10 0..	..	..	0 1 6..	0 1 6..	Aug.	1867
916 Cargoll, s-l, Newlyn	15 5 7..	..	13 15	14 5 0..	0 10 0..	Jan.	1867	
509 Creaghsaws and Penkevill, t	—	..	..	1 0 0..	1 0 0..	Oct.	1867
867 Cwm Erlin, t, Cardiganshire*	7 10 0..	..	..	25 18 0..	1 0 0..	Jan.	1868
128 Cwmystwyth, t, Cardiganshire	60 0 0..	..	..	381 10 0..	2 0 0..	Dec.	1867
280 Derwent Mines, s-l, Durham	200 0 0..	..	..	174 10 0..	5 0 ..	June	1867
1024 Devon G. Consols, c, Tavistock	1 0 0..	440	..	430 440	0 0 7..	Jan.	1868	
656 Ding Dong, t, Guisborough	49 14 6..	..	..	0 10 0..	0 10 0..	Sept.	1867
358 Dolcoath, c, t, Camborne	128 17 5..	..	..	887 10 0..	3 0 ..	Dec.	1867
614 East Caradon, t, St Cleer	2 14 0..	..	..	14 11 0..	2 0 0..	July	1867
300 East Darren, t, Cardiganshire	35 0 0..	..	..	160 10 0..	2 0 0..	Dec.	1867
128 East Pool, t, c, Pool, Illogan	24 5 0..	..	..	422 10 0..	5 0 ..	Jan.	1868
1906 East Wheal Lowell, t, Wendron	3 9 0..	..	..	8 11 0..	0 10 0..	Dec.	1867
2800 Foxdale, t, Isle of Man*	25 0 0..	..	..	71 0 0..	0 10 0..	Sept.	1867
5000 Frank Mills, t, Christow	3 18 6..	..	..	8 5 6..	0 5 0..	Feb.	1868
2950 Gawton, c, Tavistock	3 10 6..	..	..	0 3 3 1/2..	0 3 0..	Jan.	1868
15000 Great Laxey, t, Isle of Man*	4 0 0..	19	..	17 15 0..	0 10 0..	Dec.	1867	
5908 Great Wheal Vor, t, Helston	40 0 0..	21	..	20 20 1/2 21 1/2..	12 8 0..	7 6..	Dec.	1867
1024 Herodsfoot, t, near Liskeard	8 10 0..	33	..	42 10 0..	1 10 0..	Oct.	1867	
6000 Hindtown Down, c, Calstock	5 10 6..	..	..	10 0 0..	0 5 0..	April	1868
4000 Lisburne, t, Cardiganshire	18 15 0..	..	..	498 10 0..	3 0 ..	Dec.	1867
3000 Maes-y-Safn, t, Flint*	20 0 0..	30	..	27 29	0 0 1..	0 0 0..	Dec.	1867
9000 Market Vale, c, Caradon	4 10 6..	..	..	4 4 6..	0 3 6..	Jan.	1868
3000 Minera Boundary, t, Wrexham*	1 0 0..	..	..	0 13 0..	0 3 0..	Mar.	1868
1800 Minera Mining Co., t, Wrexham	25 0 0..	190	..	223 13 0..	4 15 0..	Nov.	1867	
2000 Mining Co. of Ireland, c, t, cl.	7 0 0..	..	..	17 1/2	0..	..	..
4000 Mwyndy Iron Ore*	3 5 0..	..	..	0 6 6..	0 2 6..	Mar.	1868
200 Parys Mines, c, Anglesey*	50 0 0..	..	..	157 10 0..	5 0 ..	Jan.	1868
12800 Prince of Wales, t, Calstock	12 0 0..	3..	..	0 3 6..	0 1 0..	Nov.	1867	
6000 Prosper United, t, c, St. Hilary	8 14 0..	..	..	0 5 0..	0 5 0..	Feb.	1867
1120 Providence, t, U. L. Lelant	10 6 7..	27	..	26 28	8 4 2 6..	0 15 0..	Nov.	1867
512 South Caradon, t, St. Cleer	1 5 0 0..	420	..	410 420	574 10 0..	0 0 0..	Jan.	1868
6000 South Darren, t, Cardigan*	3 6 6..	12%	..	0 8 6..	0 1 6..	Oct.	1867	
496 So. Wh. Frances, c, Illogan	18 18 9..	26	..	24 26	273 13 6..	1 1 0..	Jan.	1868
508 Summer Hill, t, Mold	3 13 6..	..	..	2 2 6..	0 7 6..	Jan.	1868
6000 Tincoff, t, Pool, Illogan	9 0 0..	14	..					